THE BUILDER

A JOURNAL FOR THE ARCHITECT AND CONSTRUCTOR.

WITH WHICH IS INCORPORATED "THE BRITISH ARCHITECT."

VOL. CXXV.—No. 4220. DECEMBER 21, 1923.

COMMERCE AND ARCHITECTURE—I.

A FEW weeks ago we dealt in a leading article with some fallacies which, in our opinion, are a hindrance to a logical development of commercial architecture. We dealt with the subject from an economic or utilitarian point of view, believing as we do in the abstract value of ideas quite apart from their momentary influence over the minds of architects. We were fully conscious that many artists could maintain that their conception of fine architecture could not be associated with anything less than a noble ideal. We would not attempt to prove that modern civilisation is essentially more commercial than at other periods in the history of our development as a nation, nor would we attempt to analyse the philosophy which seeks to prove that the pursuit of commerce is not a noble ideal. Can a nation which has subscribed in hundreds of thousands of pounds for war memorials in its churches and public places be written down as being commercially minded, when it could have built in a time of acute shortage many houses for crippled soldiers to live in rent free, or maintained a fund to keep them from want during their lifetime? It may be some other motive which prompts each of us to have a cenotaph for our own city, but it is decidedly not a commercial instinct. What we attempted to show was the difficulty which confronted every architect if he attempted to formulate a code of commercial ethics neatly graduated for various forms of architectural expression. Probably it would be more correct to say that it is the absence of clearness of thought and reasoning which obscures the true motive of architecture and robs it of that gracefulness and force which proceed from any logical development.

We are not thinking of the subject from the point of view of the architectural critic—though it would be a desirable thing to have some common ground of criticism; we are thinking of the attitude of the designer in relation to his subject, and of the possible effect upon the building. The problem could be developed a stage further if we were able to separate in our minds the hackneyed conception of the "commercial" outlook of the business man from what we conceived should be the forms which commerce should develop in its buildings. The attempt has often been made and always it would appear the conclusions are hopeless. Where architecture is to be seen at its worst we attach the blame to the commercial element, yet when we see a commercial building adopting certain architectural symbols and expressing itself with dignity it is suggested that architecture has become a means of advertisement for the proprietor or his goods. The architect apparently escapes with his philosophy intact, although it is fairly certain that many of the early commercial buildings exhibit the architect playing a losing game in his attempts to compromise by forcing his limited vocabulary of traditional architectural features to adapt themselves to modern requirements. There is ample evidence in our streets to show that there is a higher and more uniform standard of architectural design based upon fundamental principles which are gradually being understood; yet we return full circle and begin to wonder what is wrong with it because it is good! An instinct for compromise is often claimed as an essential characteristic of the English mind, but an architectural compromise is easier to understand than bad metaphysics.

No point is served by caricaturing the architectural effects of commerce upon architecture. The skyscraper, for instance, represents a social development (or anti-social, as the case may be), and is not necessarily the ideal of the commercial mind. The architect can hardly attach the whole of the blame to commerce if an architectural jumble is the result, since we cannot assume that he is powerless in his efforts to restrain his client's weakness for irrelevant sky-lines and domes, or a modern emporium designed in the mediæval style.

It is difficult to imagine an architect accepting responsibility for a design of which he secretly or openly disapproves; it is truer to life to say that he may either be glad to be associated with the building or that he has never worked out in his mind the philosophy of architecture in relation to twentieth-century needs. It is not always the business man whose mind hankers after towers and angle-turrets; the architect has been known to enter with zest into the gentle game of dwarfing a neighbouring building competing against his client. Architects have it in their power to curtail abnormal developments in commercial architecture, but first they must see to it that they do not neutralise their efforts by accepting ethical standards which they cannot logically defend.

It seems an impertinence to discuss the compelling emotion that prompts the erection of most buildings to-day with the sentiment that poised the Wingless Victory over the Acropolis of Athens, or reared the mighty dome of St. Paul's and the cathedral at Salisbury. All that can be said is that the theory of art for art's sake is difficult to maintain in our present civilisation, and particularly in a creative and structural art such as architecture. A study of elementary economics teaches us that in the very dawn of things when the people came upon a supply of food which was abundant and certain and easily obtained they had time and energy left over to devote to the satisfaction of other needs. We have not space to develop the relationship between these early expressions of art and current theories upon the artistic impulse of to-day, but we can safely say that the whole system of architectural training is opposed to the idea of architecture developed and expressed by the individual as a spare time hobby. Every age has its own expression, whether we agree with the particular tendency or not, and architects cannot hope to alter the development of civilisation by pretending to ignore it.

It is evident that architecture must be paid for, regardless of the abstract qualities which the building or the architect seeks to express; hence the need for the architect to analyse for himself the sources of money, and settle his doubts about the morality of the transactions which produce money and reproduce art. There is clearly a doubt in the minds of many architects concerning the ethical position of commerce when it desires to express itself through architecture, but the difficulty is apparently removed when commerce leaves a sum of money to the nation to purchase pictures and a building to accommodate them. The inference which is suggested is that fine architecture can only be associated with intellectual profits and dividends!

Twenty years ago the narrow-frontage building of many stories pretended to be supported by an arch which, from the thinness of its abutments, probably deceived nobody. It was designed by an architect (let us be just), but the shop-fronts of that period seemed to be designed as an afterthought by anybody. To-day, there is a vast improvement in the expression of logical construction, and the shop-front—though still an unfortunate element in the design of the building as a whole—is at last being treated with dignity and grace. Having got so far and recovered so much lost ground, is it wise to arrest a development which at least has truth and logic behind it by trifling with ethical commercial values upon which it is evident none of us is competent to judge?

NOTES.

Lloyd's.

AFTER one hundred and forty-nine years at the Royal Exchange, Lloyd's, the world-famous insurance corporation, is to move its quarters to Leadenhall-street. Sir Edwin Cooper, F.R.I.B.A., has been appointed their architect, and has prepared preliminary studies for the new premises, which it has been our privilege to see. At a glance one is immediately struck by the admirable directness of the scheme, a directness which can only be attained by much experience and by a master designer. The preliminary studies for the elevations are also well considered, with an excellent sense of proportion. The main portion of the new building will be behind the new buildings west of Leadenhall-street entrance, with a frontage to Lime-street. In the near future we hope to illustrate this important addition to London's new buildings and architecture.

Values.

THERE is, of course, an explanation to be found for the purchase of a print at Christie's, on Tuesday, for £3,045. But an explanation is hardly an excuse. We are very busy establishing "records" nowadays, but the enduring values in life are lamentably at a discount value. We shall, before long, have to send in our votes for the building which is worthy of a gold medal if we are interested enough to take the trouble. We wonder if those whose opinion is worth anything will all take the trouble to vote? A good many people could name two buildings which deserve a gold medal, but they were built before the gold medal era set in.

Higher Buildings.

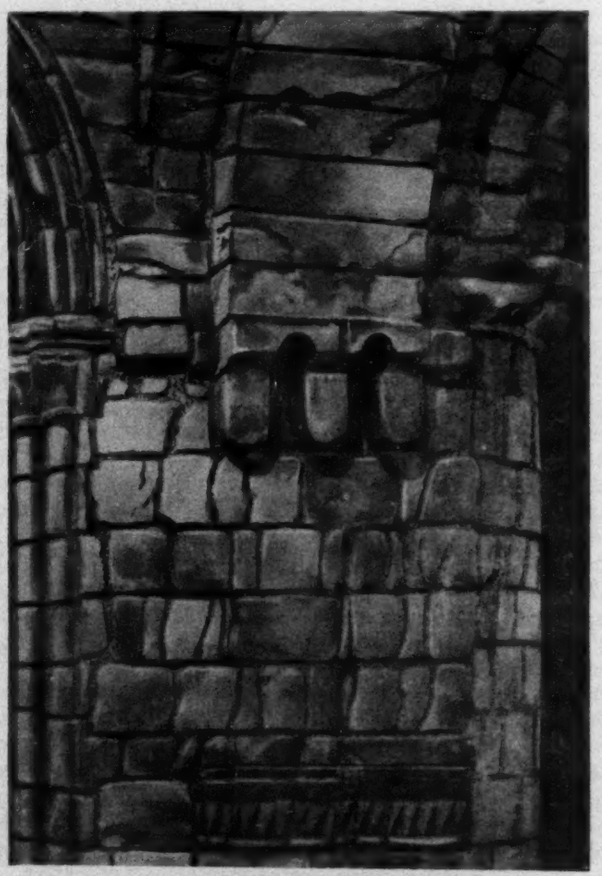
THE evidence against sky-scrapers is accumulating, and it must be a question for the serious consideration of London authorities whether the erection of very lofty buildings in the City is desirable or not. We must all agree that some real foresight should be exercised about this, and that the general health of the inhabitants and the preservation of some degree of amenity are matters that must have their place alongside the merely economical considerations.

An Academy Committee.

THE Committee which has been formed by the Royal Academy, of artists and scientists, for the investigation of the qualities of artists' materials and to inquire into the methods of cleaning pictures, is a step much needed; in fact, long overdue. The ravages of the picture restorer, ungoverned by any control, with methods kept secret to himself, have done immense harm, and the purpose of this Committee—and it is a very representative one—is to reach some general agreement, with the hope that until their decisions are published the owners of old pictures will, so far as possible, postpone any plans for the restoration or cleaning of them which they may have in contemplation. The Committee offer a number of very valuable suggestions, pointing out that the decision to clean or repair a work of art ought not to rest on the judgment of a single mind, but should be a matter for open consultation with artists and scientists who have especially studied the subject; and that no countenance should be given to secret methods. In such a matter the advice of artists will be of special value, as it is not only a matter of the materials themselves, but of their method of application which determines the possibility of what can be done. To take the case of a valuable painting which the artist over-painted in bringing it to completion with delicate glazes of colour, the restorer's methods may remove these altogether in the process of cleaning unless there has been a careful appreciation of the methods through which his results were reached. We notice from time to time accounts appearing of old masters which have been "discovered"; and which, after restoration, are expected to reach a high price. It will be a good thing when there is an authoritative body able to watch over these things, for it is the "trained artistic sense" which is so much required for these matters. The Committee includes Sir Aston Webb, Messrs. G. Clausen, J. D. Batten, Noel Heaton, and others, and in undertaking this inquiry they are doing a most useful and necessary thing.

Society of Arts Competition.

WHILE reciprocating the public-spirited efforts of the Society of Arts to improve industrial design, we are left in some doubt as to how far such competitions effect the purpose they have in view, though wishing that this may result from it. It will depend, no doubt, very much in the choice made of those who are to adjudicate on the matter. But there is another thing: Surely a certain danger lies in distributing diplomas which "come to be known as conferring a definite and generally recognised status as a designer of the first rank." Such official recommendations are not always of the same service to the arts that they are to individuals, and perhaps the present age is a little disillusioned in regard to such claims. If we could feel that the possession of such diplomas secured invariably such a status, then, of course, the more of them the better. The more diplomas the greater



Jedburgh Abbey.

SKETCH BY MR. WILLIAM HARVEY OF PART OF NORTH-WEST PIER OF TOWER AFTER COMPLETION OF THE WORKS OF REPAIR. (*See p.* 965.)

[The stones of the Norman pier have been retained with all their historic fractures. The interior only was renewed with reinforced concrete.]

SKETCH BY WALTER CRANE FOR GABLE SPANDRIL SCULPTURE, "ARTS AND CRAFTS," AT THE CAMBERWELL POLYTECHNIC. (MR. MAURICE B. ADAMS, F.R.I.B.A., ARCHITECT.)

the number of first-rank designers. But is it as easy as all this? Are the machinery and good intentions of the Society of Arts sufficient to secure all these benefits for us? At this time we do not hold with any certainty that design can best be fostered in such a way. We need to be careful lest in our desire to raise the standard of industrial design we forget the difficulties lying in industrialism itself, which has its own standards, not always those of art. The aim to encourage better design in order to sell the goods, the application of art to industry, unless considered in the light of the unalterable claims which art makes upon us—whether it sells the goods or not—should remind us of the difficulty of uniting the two together. For to unite them we must identify their objects more nearly, the spirit which informs both the designer and the industrialist must be a mutual one, and we must believe in beauty for its own sake, not to endow our business.

"Period" Rooms. WE note that in the furniture section designs may be submitted "for the furniture of a modern dining room in Adam style." We are rather sorry to see this, as we had supposed the purpose of this competition to be the encouragement of industrial design, and "Period" rooms are surely needing none at the present time, nor will industrial design be fostered by working over again this exhausted ground. To reinforce "Adam" interiors with diplomas were to discourage the very object we imagined the Society had in view. The student should be directed away from all these derivative and second-hand inducements, and be encouraged to apply his abilities in such a way as will create for industry new identity and fitness to be the beautiful expression of the wants of our own time.

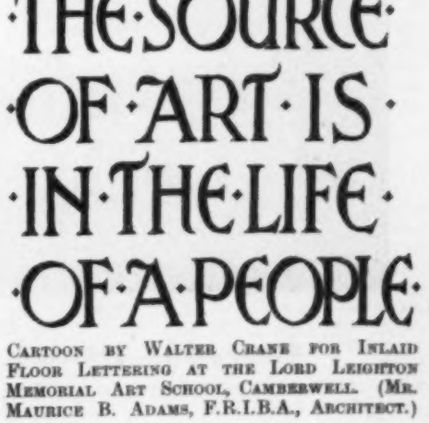
Design and Industrial Design. MUCH is being advanced just now about industrial design, but we need to be careful in our definitions. Design is all of one nature, though its applications are so many, and because we are considering it in its relation to industry it does not alter its nature. If we got to think that industrial design were one thing and that there were some other we should be in danger of separating things which cannot be divided. Industrial design is felt to be inadequate, often very bad, and we reciprocate the efforts now being made by the Society of Arts to improve it. No compromise will, however, aid us which wars against its nature. What the public wants, or is supposed to want, has little enough to do with it, and if, for instance, the chocolate box manufacturer really wants better design, he must want it for its own sake, must have faith and appreciation enough to believe in it. Otherwise we shall only reach what is already happening with architecture, where a "salesman's architecture" and other architecture are seen to have been separately inaugurated. It is our good faith in beauty which will improve industrial design, and not merely the desire to make use of it to push sales, and this will do more for us than ten thousand diplomas without this governing requirement. The aim to add the prestige of beauty to our industries is no less proud than difficult, and one which will need a faith commensurate with it.

The A. A. Conversazione. THE annual conversazione of the Architectural Association took place last week at Bedford-square, where the president, Mr. E. Stanley Hall, M.A., F.R.I.B.A., and Mrs. Hall, received the guests. There was a large attendance. There is much to be said in favour of these social gatherings, giving as they do an opportunity to meet old friends and exchange ideas. Many members who attended the A.A. Avignon excursion met again and had reminiscences to tell, while other matters of professional interest were not forgotten, especially the A.A. play, "So this is Architecture," and the place of meeting of the next annual excursion. Mr. Yerbury had arranged an admirable musical programme for the early part of the evening, followed later by a dance. On the walls were hung members' holiday sketches and photographs of the Avignon trip.

Preservation of Old Buildings. To the small, but appreciative, audience which attended Sir Frank Baine's lecture at the Society of Arts last week, the fine photographs of old abbeys, &c., which showed the old buildings before and after preservation, the thought must have occurred that from the purely artistic point of view the preservation was rather disastrous. The record of architecture is, of course, preserved, but the effect left us is rather that of dead bones. It is possible that most people will consider it better to preserve, but we must all admit that we lose a vast deal in the process. But as things are the final word is, of course, preservation.

A Professional Tribute. IT is not given to many men to take a leading part in the representation of the affairs of an important profession for nearly 50 years, and the fact that Mr. Maurice B. Adams, F.R.I.B.A., should have been associated with one of our contemporaries for such a period is an event of sufficient interest to deserve suitable recognition. In this belief a few of his friends arranged a luncheon in his honour this week at Simpson's, when some interesting speeches were made in reference to his conspicuous service to the profession for many years as an architectural journalist and his stimulating influence with a large number of students in architectural design. The opinion of a well-known architect, who was unable to be present on the occasion, that Mr. Adams had deserved and gained the affectionate regard of all who had been brought into intimate contact with him, was heartily endorsed, as was the hope that he would write his reminiscences—remarks with which we gladly associate ourselves. We understand that the luncheon was not intended in any way to anticipate a more widespread and public recognition of Mr. Adams' services to the profession, which it may be intended to arrange. It is always pleasant to see a friendly gathering arranged to pay a tribute of regard to a fellow worker, and Mr. Maurice B. Adams must have appreciated the sincerity of feeling which prompted this mark of esteem.

A Bristol Movement. WE understand that the Kyrle Society in Bristol has arranged with the Royal West of England Academy for a series of lectures to deal with local buildings. These lectures are to be given by the Academy Students to the Secondary School children. The idea is wholly admirable and reflects the greatest credit on the energy of the Society and also on the Academy authorities for their co-operation.



CARTOON BY WALTER CRANE FOR INLAID FLOOR LETTERING AT THE LORD LEIGHTON MEMORIAL ART SCHOOL, CAMBERWELL. (MR. MAURICE B. ADAMS, F.R.I.B.A., ARCHITECT.)

GENERAL NEWS.

Professional Announcements.

Mr. Williams Ellis, of 22, South Eaton-place, is moving his main office to the old Viscount Milton School, 22B, Ebury-street, S.W. 1, on January 15.

The address of Mr. W. Allison, A.R.I.B.A., architect and surveyor, is now 50, Rathbone-place, London, W. 1.

Mr. Victor H. Wilson, architect and surveyor, 91, London-road North, Lowestoft, has taken over the management of the Architectural and Surveying Department of Messrs. P. Chase, Gardener & Co., 269, High-street, Hounslow.

Prix-de-Rome Scholarship in Sculpture.

Mr. David Evans, A.R.C.A., of Chorlton-cum-Hardy, is the winner of the Prix-de-Rome Scholarship in Sculpture.

Bartlett School of Architecture.

Three entrance scholarships tenable in the School of Architecture and two Bartlett Exhibitions are available for award to students entering the School in October, 1924. The value of these scholarships and exhibitions is not less than £40 a year, tenable in some cases for three years and in some for five. The value of any scholarship may be increased if the circumstances make such a grant necessary.

Year's Work of the Road Fund.

The report of the administration of the Road Fund for the period April 1, 1922, to March 31, 1923, was issued recently. The year was one of great activity all over the country in matters connected with highway and construction improvement. The appropriation (1923–4) will include £9,000,000 as grants to maintenance and improvement of class 1 and class 2 roads. In addition to the sum named a further amount of £1,533,000 will be provisionally set aside as a contribution to the cost of the proposed new Liverpool-Manchester road.

Modern Developments in Town Planning.

A lecture was given at the Engineers' Institute, Cardiff, on December 13, by Professor Abercrombie, M.A., A.R.I.B.A., of Liverpool University, on "Modern Developments in Town Planning." A large attendance of members of the Institute of Builders (South Wales Branch) and of the South Wales Institute of Architects, under whose joint auspices the lecture was delivered, was presided over by Mr. T. Alwyn Lloyd, F.R.I.B.A. The lecturer appealed for greater development of the æsthetic element in town planning in contrast to the now too frequent practice of sweeping away all natural advantages or associations of historic interest. Where there was available natural advantage it should be made use of in framing town schemes and development. Cardiff Castle, in the centre of a busy city, made a pleasing contrast to many places. Lantern illustrations of æsthetic elements in ancient Grecian planning were given and instances of modern endeavour on these lines shown. The consequences of neglect, such as was productive of the "Grid-iron" of New York, were also illustrated.

Victoria and Albert Museum.

The Department of Woodwork of the Victoria and Albert Museum has recently received a gift of a set of three chairs, for the Master, Senior Warden and Junior Warden, respectively, of an old lodge of Freemasons constituted in 1730, and meeting at the "White Bear," King-street, Golden-square. The chairs, now exhibited in Room 57 of the Museum, are about the date of the original lodge. These chairs illustrate the period of transition from the later style of Queen Anne to that of the earlier productions of Chippendale. They have carved and modelled claw-and-ball feet, backs with scrolled terminals and centre splats also carved. Each chair is inlaid with the emblems appropriate to the Master and Wardens, and the set forms an addition to the series of chairs made for special purposes, now drawn together in the same room. These include the chair of the President of Lyons Inn, which has for some time been in the collection; a characteristic example of a Chairman's chair in the style of Robert Manwaring of about the year 1760; and another in that of Robert Adam (*c.* 1770) with shield shaped back of French type, and carved vase with garlands and guilloche ornament—the two latter being recent acquisitions. The Department has also acquired a reading table of carved mahogany, with square top resting on tripod stand terminating in scroll feet, the top being hinged so that it can be raised to form a reading desk, and with four drawers providing compartments for pen and ink. This table was, with other furniture, made in 1770 by William France for the library at Kenwood, under the supervision of Robert Adam, who built the house for Lord Mansfield. The bill is still in existence, and shows that France received the sum of £6 14s. for the table now in the Museum (Room 56).

COMPETITION NEWS

Dunfermline War Memorial.

FOR THE DUNFERMLINE WAR MEMORIAL COMMITTEE.—Designs for a monument to be erected at a cost of £3,000. On receipt of £1 1s., which will be returned on receipt of a *bona fide* design, competitors will receive conditions of competition, plan of site, and photographs of surroundings. The assessor is Sir John J. Burnet, A.R.A., R.S.A. Sending-in day, January 1, 1924.

Swansea Masonic Temple.

In this competition, the assessor, Mr. Arthur Keen, F.R.I.B.A., has made the following awards: 1, Messrs. Willmott & Smith, 4, Park-place, Cardiff; 2, Mr. A. F. Webb, M.S.A., Blackwood, Mon. The design placed first is given in this issue.

Industrial Designs.

The Royal Society of Arts will hold a competition in June next year, at the Victoria and Albert Museum. Over £1,000 will be offered in prizes. The competition, open to students in British schools of art, and all British subjects, will be divided under the following heads: Architectural Decoration, Textiles, Furniture, Book Production, Pottery and Glass, and Miscellaneous.

Full particulars of the competition may be obtained from Mr. G. K. Menzies, Secretary, Royal Society of Arts, John-street, Adelphi, London.

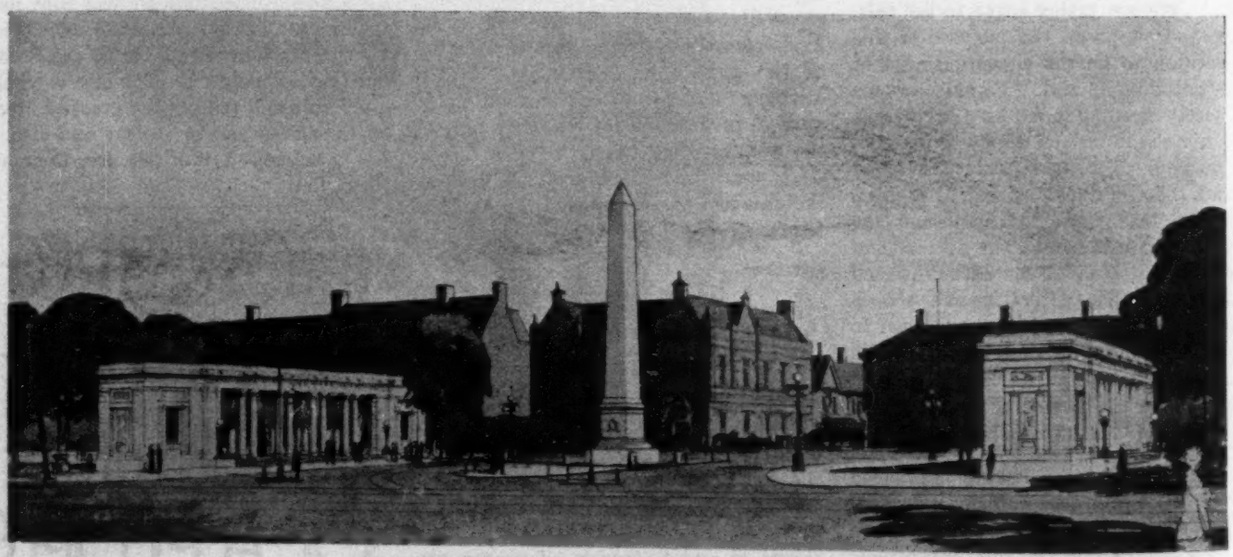
Other Competitions.

Other competitions still open include the following (the dates given are, first the sending-in date, and second the issue of *The Builder* in which full particulars were given):—Singapore College (Jan. 1, 1924; March 30). Dudley Memorial (Jan. 5, 1924; Sept. 14). Memorials to the Missing (Jan. 1, 1924; Aug. 3). Newcastle Concert Hall (Feb. 1, 1924; Oct. 26). Essays on Concrete (Dec. 31; Nov. 16). Belfast Union Heating and Lighting (March, 1924; Nov. 9). Essays on Heating and Ventilating (Mar. 31, 1924; Nov. 9). Monument to Sir Wilfrid Laurier (April 3, 1924; Dec. 14). Holmside Hospital (Feb. 14, 1924; Dec. 14).

MEETING.

SATURDAY, DECEMBER 22.

London Society.—Visit to Trinity House. 2.30 p.m.



Southport War Memorial: The Monument.

MESSRS. GRAYSON & BARNISH, FF.R.I.B.A., AND MR. A. L. MCMILLAN, A.R.I.B.A., Joint Architects. (*See p.* 964.)

From a Drawing by MR. LEONARD BARNISH, F.R.I.B.A.

CORRESPONDENCE.

Strand-on-the-Green, Chiswick.

SIR,—Notices have recently appeared in the Press to the effect that the new embankment wall recently erected by the Chiswick Urban District Council has been made to conform with the wishes of the Art Standing Committee of the R.I.B.A. by the addition of a wide splayed coping, well weathered and projecting each side. Further, that the R.I.B.A. has thanked the Chiswick U.D.C. for the consideration shown to the Institute's wishes. The first part of this statement is so wide of the truth that the facts should be made known generally, as follows:—

Early in 1923 the attention of the Art Committee was called to the fact that the Chiswick U.D.C. was about to rebuild a portion of the embankment wall at the above. In view of considerable anxiety which was being shown by local residents and other members of the public as to the Chiswick Council's intentions, the Art Committee approached the Chiswick Council on the matter. After repeated enquiries over a period of three months or so the Chiswick U.D.C consented to an investigation of their proposals.

Thereupon the Art Committee appointed three of its members, of which I was one, to meet the representatives of the Chiswick U.D.C. and certain public-spirited residents of the neighbourhood on the site, when it was found that the work was already considerably advanced, and showed a portion of the wall completed and faced with random rubble masonry of a very ugly and mechanical appearance. It was explained that the wall was to be finished with an iron spiked unclimbable fence.

Following discussion, the representatives of the Chiswick U.D.C. agreed to the suggestion of the representatives of the Art Committee that the remainder of the wall facing should be of old stock bricks—of which the Council had plenty at their yard—of the character shown in parts of the old river walling, that the parapet should be finished with a plain thin stone coping, and that the railing should be omitted.

Some months later the R.I.B.A. was informed by the Chiswick U.D.C. that they were unable to secure the necessary adjustments in their contract, and that the work was being continued according to their original scheme. In view of this, a statement explaining the Institute's action in the matter was published in the *Journal* and, I believe, in the Architectural and general Press.

Since the recent references to the matter in the Press I have visited the site and found the work completed in the original ugly random rubble facing, pointed in cement with a sort of engineering joint, and capped with a mechanically square and smooth stone coping, 14 in. by 3 in. in section, which does not project over, but is even a little narrower than the parapet wall. The effect is that of a slice of rather rich plum cake with a generous slab of almond icing to it; the R.I.B.A. evidently thinks with me in this, for it has swallowed it whole.

The *Chiswick Times* of November 16, 1923, says that the letter from the R.I.B.A. states: "... the work as now executed by the Chiswick Council at Strand-on-the-Green entirely meets the views of the Art Standing Committee." Having now seen the wall, I regard this statement with the greatest astonishment.

Until one remembers that the composition of the present Art Committee is not the same as that of 1922–23, it is difficult to understand its feelings of approval and gratitude towards the Chiswick U.D.C., and as one of the three representatives of the Art Committee of 1922-23 I wish to dissociate myself entirely from any such complacence.

To put the matter in a nutshell, the Chiswick U.D.C. has snubbed the R.I.B.A., and the R.I.B.A. has thanked the Chiswick U.D.C. for doing so.

ARTHUR WELFORD.

Cambridge Collegiate Buildings Committee.

SIR,—I did not intend to enter into this controversy again, but I notice a number of your correspondents assume that the conditions of the Cambridge competition were broken by the winners.

Anyone who has seen their design and has studied the conditions will know that that is not the case. Statements to the reverse effect were originally issued to the Press by a group of the beaten competitors, but on the very points they raised the conditions were in each instance permissive. The fact that a different impression has evidently got abroad is exceedingly unfair to the winners. I would suggest again that the matter is one which clearly calls for the intervention of a Committee of the Institute, Practice, Standing or Competitions, whichever may be the competent authority.

C. H. REILLY.

Liverpool.

The Pupils of Sir John Soane, R.A.

SIR,—An excellent and complete list of Soane's pupils was compiled and published by Mr. Arthur T. Bolton, F.S.A., F.R.I.B.A., and it may interest your readers if we consider what became of at least some of them.

Mr. E. Foxhall, D.S. St. George, Hanover-square, was present in January, 1845, at a meeting of London District Surveyors, with a view to forming an association for mutual assistance and support. He was afterwards Hon. Treasurer of the District Surveyors' Association until 1858, when he resigned his District.

Mr. J. H. Good was District Surveyor of Poplar, and was later joint architect for the Orphan Clergy School at Leatherhead.

Mr. J. M. Gandy, A.R.A., became a frequent exhibitor at the R.A., and Mr. D. Mocatta became a well-known architect, while Mr. C. J. Richardson became noted as an architectural artist.

Sir R. Smirke, R.A., obtained a number of commissions for good jobs, and Mr. George Wightwick published one or two books.

The works of Mr. George Basevi are well-known to the Fitzwilliam Museum at Cambridge, &c. He fell from the roof of Ely Cathedral and was killed.

Many in the list did not reach a conspicuous position.

HENRY LOVEGROVE.

The Story of a Lake.

SIR,—The article in *The Builder* of Dec. 7, under the heading of "The Lake in St. James's Park—Past and Present," is very interesting, and to me it is particularly so because my old friend The Lake in St. James's Park is referred to.

The ways of H.M. Office of Works are, at times, inscrutable. When War huts were sorely needed in London the site of this Lake was selected upon which to build the huts, involving, of course, the draining off of the water. After the Armistice these huts remained until the pressure of the Press emptied them of their occupants, and thus put an end to those delightful little episodes, which I used to see, where pretty little flappers tripped from one hut to another, about 11 a.m., with cups of cocoa for the sustenance of their Cuthberts who had been working strenuously for nearly half an hour.

Then came the refilling of the lake, and, after the clearance of the huts, the "Department" exercised its usual skill in showing "How not to do it." All that was really needed was to fill in the fissures with puddled clay, let in the water from the various pipes which supplied the lake, and thus give back to the public the old delights of the Park.

This course, however, was not adopted, and after many attempts to "make the flesh creep" and sundry scientific admonitions, what we now know was executed, and the work consists of:

(1) Preparation of the old bed of the lake for its future covering.

(2) A core of hard good old bricks broken up for the purpose.

(3) Layers of gravel and concrete.

(4) Two layers of steel reinforcement of ½ in. rods, laid in squares of about 12 in.

(5) A layer of concrete about 3 in. in thickness.

(6) The finished surface of cement.

It may be that this new bed will resist the boating pressure which may hereafter come upon it, and the cost to the taxpayers has only been about £50,000.

WM. WOODWARD.

Criticism Permanent and Passing.

SIR,—It is true that introspection and expression are not commonly equally intended by the same individual; but that introspection has any inimical effect upon expression—beyond this: that the thinker primarily engaged in exploring the depth of his person is tempted to prolong the line inward further than he projects it outward—I cannot conceive. Complete thought, I assume, runs inward and outward in a straight line. Incomplete thought may be represented by any figure that is not a straight line. But, whatever its external configuration may be, it is but opposite in direction and capable of equal extension to that which is internal. It is, I hold, axiomatic that the depth to which we descend conditions the height to which we are able to climb—though not the height to which we do climb.

Thus the artist expresses externally the result of his criticism of works of art by a work of art. The Parthenon is criticism of the Doric, superior to any words that have or can be written upon Doric art. So the literary criticism of literature is the most nearly perfect and simply apprehended of all forms of verbal criticism.

The verbal criticism of the arts other than literature, even when the author is himself an artist in a sphere other than words, represents externally a line that internally may be conceived as parallel but not coincident with his other expressive line. If it were actually coincident the external manifestation would be alike in kind and co-extensive—that it is not makes it clear that it is not the same line.

The very employment of words to transmit thought is but a makeshift. Thought can only be apprehended by thought.

DUDLEY HARBRON.

Hull.

Society of Chemical Industry.

In connection with the report in our last issue of the papers read by Mr. J. Allen Howe and Mr. J. J. Fox, at a meeting of the Society of Chemical Industry, Messrs. Szerelmey, Ltd., state: "As it is commonly recognised that water is the chief cause of the decay of stone, it appears that the safest method is one which provides an impenetrable membrane without casehardening the stone. Surely the free breathing of the stone on its outer face is a very minor consideration compared with keeping out water and its accompanying deleterious agents."

Can Tarnishing Be Prevented?

SIR,—With reference to the above appearing in last week's issue of *The Builder*, it is my opinion that the only way to keep silver goods correctly, and also to save labour, is to first of all to clean the silver thoroughly with some good plate powder, and then to add more plate powder and leave this second application to dry on the goods and to be brushed off, and the silver re-rubbed with a chamois leather the next time it is wanted.

D. R. BROADBENT, A.M.I.E.E.

London.

SIR,—The only way to prevent tarnishing is to keep the silver in airtight cases. One of the worst cases of tarnishing in my fifty years' experience was at a goldsmith's, at Exeter. Here the River Exe runs under the shop windows and the silver had to be taken out every ten days and cleaned. In 1897, Messrs. Vale Bros., of Weston-super-Mare, received an order to make the windows airtight; since then there has been no trouble whatever with the silver goods.

EDWARD VALE.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

HIGHER BUILDING IN RELATION TO TOWN PLANNING.

MR. RAYMOND UNWIN, F.R.I.B.A., delivered a lecture on Monday, at the Hall of the Royal Society of Medicine, on this subject. The chair was taken by Mr. H. C. Gooch, Chairman of the London County Council.

The lecturer said twenty or thirty years ago in England it was generally assumed that great gains could be secured by overcrowding dwellings upon the land; and that some dire economic necessity arose from those reputed gains which compelled us so to develop our towns. That fallacy had now been pretty well exploded. Most of those who had examined the matter were agreed that, if people so willed, land could be developed at a density of ten or twelve houses to the acre, at little, if any, more, and sometimes at even less cost per house, than the same land could be developed for the same type of house, at a density of twenty or thirty to the acre; that so far from there being anything to be gained from overcrowding dwellings on land, the fact was such overcrowding yielded less total return to the landowners, and afforded a dearer plot for the occupant. So that apart from other disadvantages, congestion of dwellings was an expensive luxury. Unless they were careful modern business intelligence would not be content until it had had actual and disastrous demonstration that the vertical form of overcrowding had even less to be said for it than the horizontal kind. The fact that the method had been fairly well tested in America; that it had created there urban problems of a difficulty exceeding anything which they knew even in London; that 183 American towns, which contained 40 per cent. of their urban population, had already adopted zoning ordinances; and that the remaining cities hurried after one another pell-mell to adopt regulations which limited the height of buildings, as drastic as the vested interests already created would allow, did not seem enough to convince some of their urban theologians that many men could not stand on the same flagstone at the same time, nor more than one car move at one time on an identical piece of roadway. Nevertheless, in the hope that it was not too late to save London from copying mistakes which New York, Chicago, and other American cities now regretted, and the evil results of which they were now desperately struggling to remove, it seemed worth while to examine somewhat carefully the conditions which prevailed in those cities, and to realise what would be the effect in London if they now adopted the method of expansion upwards which the Americans were trying to discard.

The arguments that could be brought against the adoption of high buildings were many and weighty. The law of diminishing returns applied to such buildings in almost all respects. With every added story the effective floor area per story was reduced, while the cost per square foot was increased; the greater proportional number of lifts required took their toll of space from each of an increasing number of floors. You did not dispense with transportation by going up; you merely changed the horizontally moving omnibus for the vertically travelling lift, and, incidentally, made walking for even short journeys far more difficult.

The more general, or town-planning aspect of the problem, had acquired a special degree of urgency for them during the last few years, because they appeared to be following another lead of their American cousins in regard to the extensive use of the private motor-car.

It was not yet apparent what would prove to be the saturation point in regard to ownership of motor-cars. Mr. Ford, who had contributed more than anyone else to the supply, did not consider that that point had been nearly reached.

To understand the traffic aspect of the high building question, it was necessary first to realise the extent to which an increase in the height of buildings affected the demand on street space. Fortunately this problem of height had recently been investigated with great care by the Chicago Real Estate Board, in connection with the fixing of height limits throughout that city. In their report they gave precise data for buildings ranging from five to twenty stories high, erected on one particular corner plot, including the net rentable floor space, cost, and other matters. There appeared to be a fairly constant relation between the net rentable floor space and the total day population. He had checked it in connection with one or two individual buildings, like the Woolworth in New York, and also in connection with the whole of the loop area of Chicago, and he found that a figure of about 45 square feet of rentable floor per head of population appeared to be near the mark.

As regarded carriage-way, it was safe to assume in America that the class of people which formed the day population in city buildings, including as it did a minimum proportion of children and others not owning cars, would at any rate own the average number of one car to every ten people. If those cars were to attend at the building to bring people to work, or take them away in the evening, and were packed as closely as already indicated, they would fill the whole of the carriage-way for a length of 1,206 feet with a five-story building, 2,220 feet with a ten-story building, 4,158 feet with a twenty-story building, and 5,616 feet, well over a mile, with a thirty-story building. If half the carriage-way only were taken, on the ground that the other half of the street should be left for the use of the buildings on the other side, those lengths would have to be doubled. It might reasonably be said, therefore, that with the present extent of ownership of motors in America, the cars required twice as much length of roadway to accommodate them as the people would require walking along the footways.

They would hardly be surprised, therefore, that the utility of the private car was diminishing, or wonder at the enormous congestion of traffic in cities like New York and Chicago. It was only because the very tall building was quite exceptional in New York, and even on Manhattan Island was confined to very restricted areas, that an absolute deadlock had not already been reached.

The difficulty of dealing with the foot passengers was no less than that of the road traffic. It was estimated that the subways could deal,

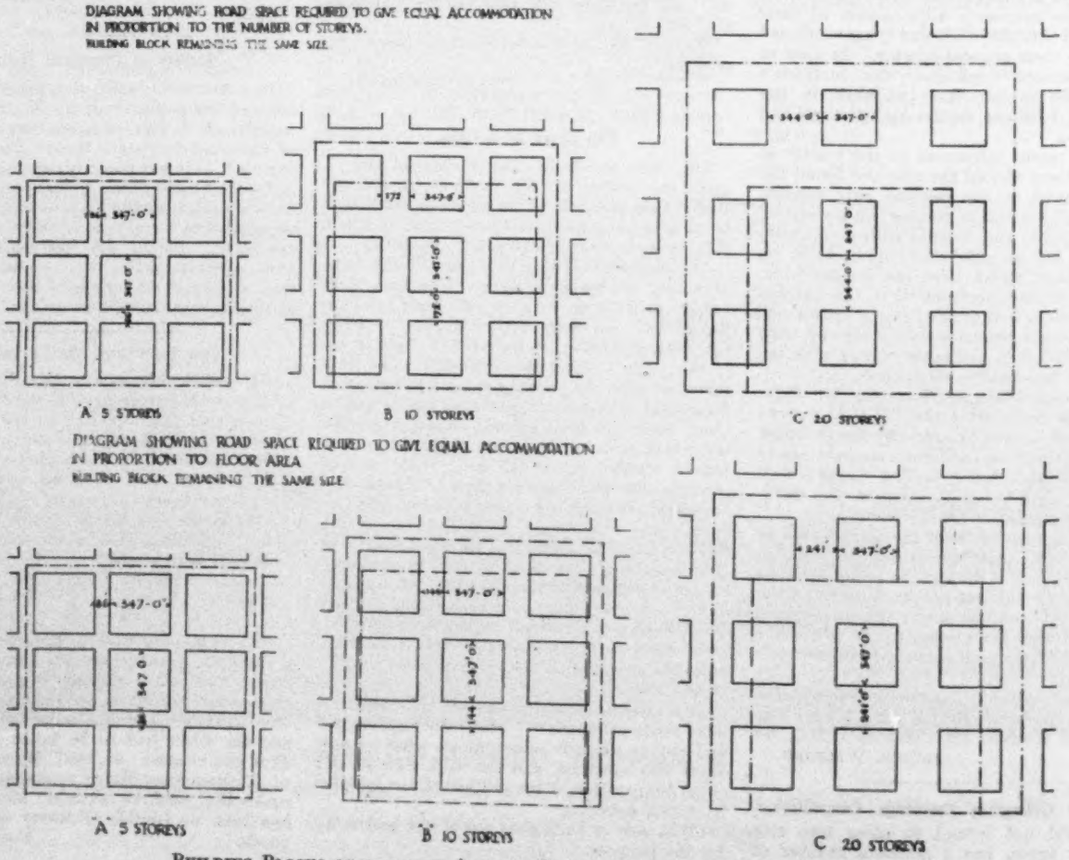


DIAGRAM SHOWING ROAD SPACE REQUIRED TO GIVE EQUAL ACCOMMODATION IN PROPORTION TO THE NUMBER OF STOREYS.
BUILDING BLOCK REMAINING THE SAME SIZE
A 5 STOREYS
B 10 STOREYS
C 20 STOREYS
DIAGRAM SHOWING ROAD SPACE REQUIRED TO GIVE EQUAL ACCOMMODATION IN PROPORTION TO FLOOR AREA
BUILDING BLOCK REMAINING THE SAME SIZE
A 5 STOREYS
B 10 STOREYS
C 20 STOREYS

BUILDING BLOCKS OF THE SAME AVERAGE SIZE AS THOSE IN "THE LOOP," CHICAGO.

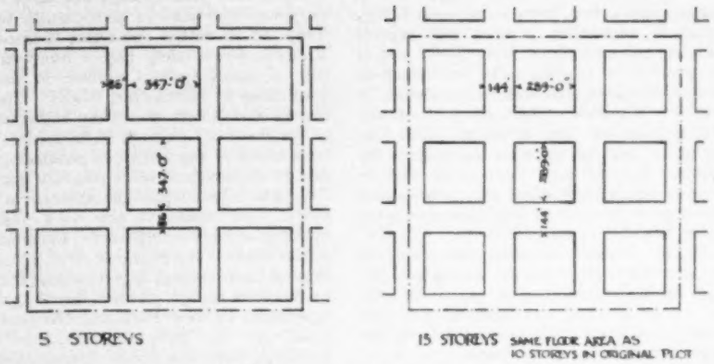


DIAGRAM SHOWING WITH SAME ROAD SYSTEM THE WIDENING OF ROAD AND CONSEQUENT REDUCTION OF BUILDING BLOCK TO GIVE SAME ROAD ACCOMMODATION IN PROPORTION TO FLOOR AREA.

at a maximum, with 60,000 people per hour, if they could get that number to the trains. But they had already seen that the 14,000 people from the Woolworth Building would themselves occupy over a mile and a quarter of one of New York's main footways, and it would take them half an hour to enter the station. The congestion at the entrances to the tube stations, under these circumstances, could hardly be surprising, but this was not the worst. The condition had been reached when it was doubtful whether any relief could be secured by constructing new tube railways.

If the difficulty of accommodating the pedestrian and the moving traffic were great, the case of the standing motor-car was even worse. Of the 60,000 motor-cars which the present occupants of the Loop owned among them, only 3,500 could find places where standing was permitted within the Loop area. If the whole of the road space were packed solid with cars, there would still be only standing room for 11,000 cars, or something like one-fifth of those owned. As a matter of fact, the car owners of the Loop area had appropriated the large open space between Michigan-avenue and the Lake, set aside for Grant Park, and it was no uncommon thing to see 25,000 motor cars, or more than twice the number that would fill the streets of the Loop, parked at one time on this gigantic motor garage. Indeed, the promoters of the great town-planning scheme designed by Daniel Burnham, of which the park was a conspicuous feature, were not free from anxiety as to how they were to recover the area from the motor owners, in order to lay it out and plant it.

Without pursuing the matter further, he thought that enough had been said to prove the main contention which he had put forward—that increase in height of buildings necessarily involved augmented street traffic; that where the traffic had already reached the comfortable capacity of the streets, any further increase in height must cause or increase congestion, with consequent loss of time and efficiency for all the users of the street. Further, that the increase could not in practice be met by street widening, because the utmost that could be done in this direction could barely cope with the other causes, which in all growing modern towns were tending to swell the volume of street traffic.

Unfortunately he had come across no evidence that the increasing use of the private motor-car caused a diminution in the patronage of public means of conveyance. On the contrary, experience showed that the demand for public transportation facilities was still rapidly growing. The increased extent to which the streets of London were now being occupied by the motor omnibus must be apparent to everybody, and the lengthening queues of those 'buses which accumulated on important road crossings already presented a formidable appearance. It was clear, therefore, that, quite apart from any increase in the height or volume of buildings within the central area of London, they were likely to have to face a steadily increasing volume of private and public transportation on the streets. It would tax all their powers to provide adequate road space to deal with the traffic, without permitting any increase in the height of buildings, with the consequent further congestion of people and business in the centre.

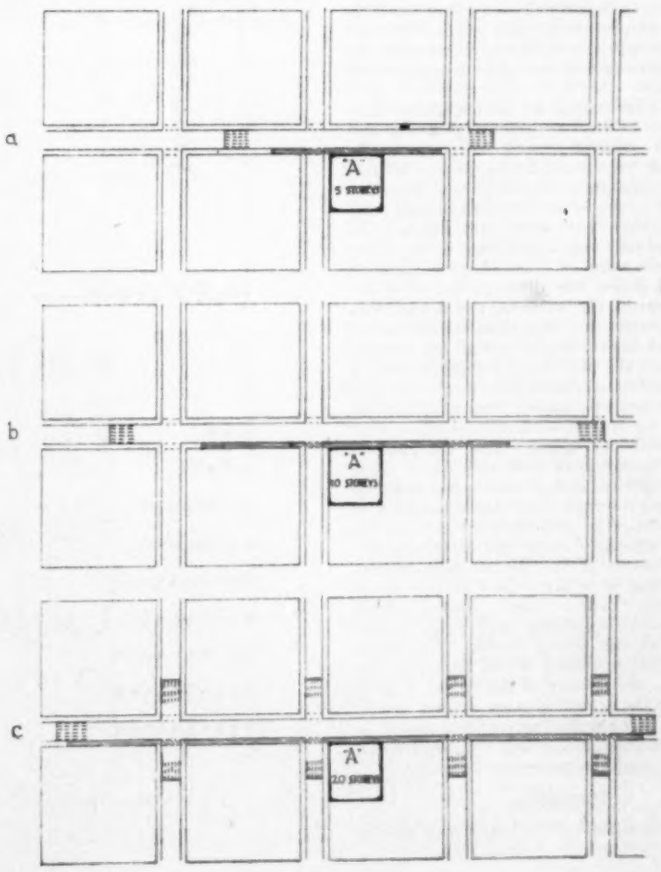
The advocates of high buildings suggested that their policy would at any rate reduce the general traffic problem. He found no evidence to support the contention, and much that tended the other way. If the concentration of people in high business and residential buildings tended to reduce traffic, a comparison of the traffic conditions in New York, with those in decentralised London, should give some indication of this. On the contrary, the number of journeys per head of the population in New York exceeded 500 per annum, considerably more than in London, where last year they numbered 390.

He ventured to suggest that, contrary to the view of the advocates of high buildings, it was approximately true to say that in regard to a large town, the nearer people lived to the centre, the greater was the demand which was made on the street and the various public transport conveniences, and the farther they lived from the centre, the less was that demand. Anyone who would consider the ways of his own family and those who served them would confirm this.

The real transport difficulty in connection with the residents in Southend and similar places was of quite a different nature. It was not so much a question of congested traffic in the centre, as one of the cost of providing adequate transport facilities at the two busy times, when folk were going to or from their work, in cases where the demand for transport during the remaining hours of the day fell far below the peak load. The problem was by no means insoluble. The chief difficulty sprang from the capital cost of the permanent way, which might have to be spread over a short daily use of the line. Apart from this fact, the running of a full train from start to finish of the journey was more economical than the condition of most suburban traffic, in which the load began to diminish at the first stop, and most of the trains had one-third or two-thirds of their seats empty for a considerable part of the journey. The rolling stock could easily be diverted to the lines where midday traffic was most intense. The capital cost of the permanent way itself would be immensely reduced if the routes were reserved in the regional town plan. Moreover, the means of transport were now so varied that one suitable to most kinds of load could be provided if there were effective co-operation between the town-planning and the transport authorities; while the efficiency of the transport itself could be increased, and the strain on the roads greatly reduced, if all the various means now available were co-ordinated under one general direction.

Some truths, the lecturer continued, seemed too obvious to be readily credited; men were prone to try clever and complicated devices to attain the same end by a more devious route. Perhaps the nation was feeling specifically poor,

DIAGRAM SHOWING AMOUNT OF STREET AREA REQUIRED WITH BUILDINGS OF DIFFERENT HEIGHTS TO ACCOMMODATE (THE AVERAGE NUMBER OF PEOPLE IN THE BUILDING 'A' AND THE AVERAGE NUMBER OF CARS OWNED BY THEM



but, to produce more wealth or to waste less seemed too simple methods of enrichment to be popular. Oppressed as they were, too, with the miseries of overcrowding and housing shortage, how hesitatingly did the simple remedy of building plenty of good houses secure full recognition. Similarly, the towns being already unbearably congested, and the traffic in their streets in danger of being reduced to crawling pace by its excessive volume, the idea that congestion would best be relieved if we desisted from crowding, or traffic most effectually reduced by better distribution of people and buildings, was much too simple to be readily accepted. Indeed, many seemed bent on piling more buildings on the top of those we had and boring more subways or erecting more elevated tracks to pour their additional multitudes into the already swollen torrent in the streets.

To the town planner this looked liked sheer madness; but perhaps there was something unusual in his make-up which predisposed him, with child-like innocence, to put more faith than some of his neighbours in the simple and the obvious. Or perchance, if an architect, there was something in his training or his practice which encouraged this tendency. At least, it was a fact that the art of design, which it should be the purpose of his training to develop, and his life work to practise, consisted largely in finding simple solutions for seemingly complex problems When the designer could not see the forest for the trees he was a lost soul! He must depend on his trained imagination to keep the forest as a whole ever clearly in his view while his mind was occupied threading its way through the obstructing trees and their distracting shadows. If he missed the one simple and direct path to unity, which when found would appear to all to have been quite obvious, he would usually have produced not a design at all, but a mere compilation.

He had ventured to draw from American cities a warning as to some things which they should avoid, and to use their experience as a guide for their future steps. Beautiful as were many of the towers of New York when considered singly, there was yet lacking the sense of grouping between them which would spring from their forming parts of a greater design. Fine as individuals, they bore yet little relation or proportion to each other. He was inclined to compare a cluster of them with the three related towers of that older Lincoln which they prized.

However that might be, as architects they were trained to rely on orderly planning and proportional relation; and they naturally believed that they could be applied to towns; that the application of foresight and planning would result in the better distribution and relation of each other of industrial, commercial, and residential areas, and could secure the more generous reservation of belts of open space to protect and define the different parts of the town, the wards, the suburbs, the dormitories or the satellite towns; that cities should extend not by fortuitous accretions around the circumference, but by the addition of definitely planned and defined suburbs or satellite towns, each made as self-contained as possible, depending on the main centre for only those functions which were by their nature centralised; that the position of suitable rapid transit lines to connect these parts to the centre, and to each other, could be laid down and reserved, and that congestion of street traffic could be prevented not only by the provision of adequate roads, but mainly by the proper localisation of the life of each district, and the saving of a large part of the useless rushing about which now sprang from so many people, buildings, and parts of the town being in the wrong places. They were convinced that congestion would be cured, not by increasing the density of the crowd, but by transforming the crowd into an orderly queue. This at least was the alternative they offered to the policy of expansion upwards, being convinced that nothing could be gained by crowding.

Discussion.

MR. H. C. GOOCH moved a vote of thanks and said he agreed with every single word of the paper, which had been most convincing. They had to remember London was several hundreds of miles north of New York, and if it were possible to translate the conditions of America to England, the difficulties would be aggravated. Whatever might be said of the commercial value of high buildings, there was nothing to be said for them as habitations for the people. If they were doomed to live in buildings in which they could only get up and down in express lifts, there would be no opportunity for healthy exercise.

MR. C. R. FORBER seconded the vote of thanks, and said Mr. Unwin had given the devotees of high buildings a good deal to answer; a good deal to think about. He hoped that London would be spared from the evils that had inflicted New York.

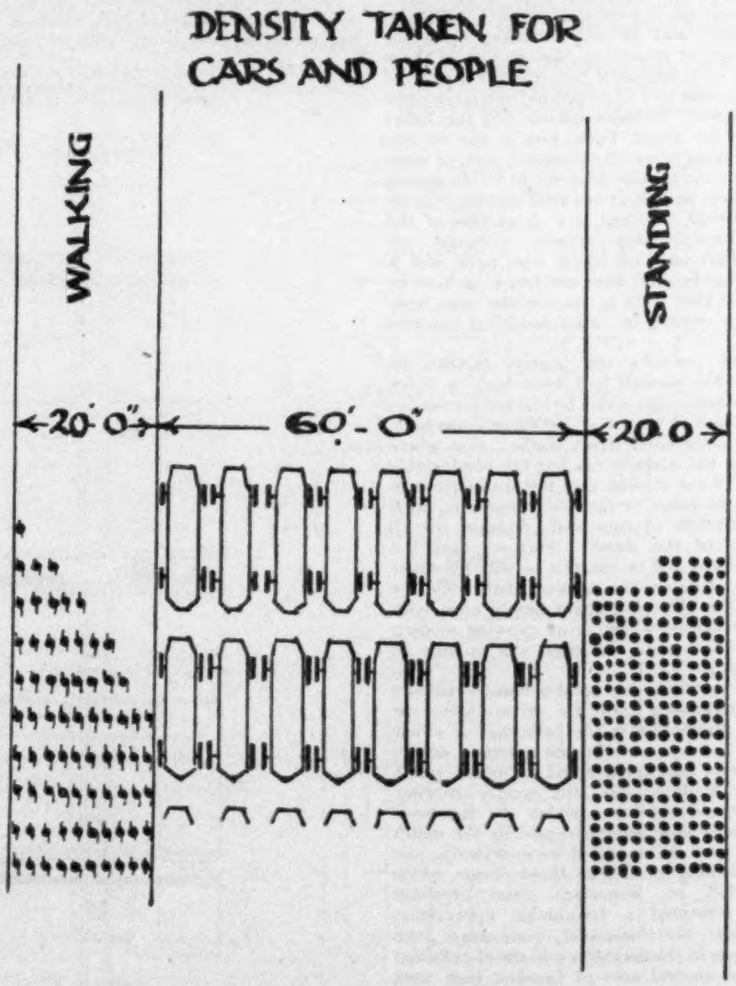
PROFESSOR ADSHEAD, F.R.I.B.A., said he came with the anticipation of hearing some new argument put forward. The question was almost a hardy annual; he felt, however, that the solution was near at hand. There was one point which he thought might be misinterpreted. The lecturer said if Central London were occupied by householders, we should have increased congestion; but if one took a map of London it was found that the old residential quarter had rapidly decreased in the centre, yet it did not mean that congestion had decreased.

MR. EDWARD WARREN, F.R.I.B.A., said it would be an appalling disaster if London were to admit buildings of even half the height of New York and Chicago. If London were deprived of sunshine our streets would be deplorable.

PROFESSOR BERESFORD PITE, F.R.I.B.A., said that a very important and interesting part of the subject could be dealt with from the æsthetic side. Whatever beauty was manifested in a high building was entirely taken away if they had another one next to it: one only was sufficient to give dignity to the city. They could realise the effect if instead of one Victoria Tower they had a hundred crowded into a small space, similar, in fact, to the conditions at Manhattan Island. The æsthetic aspect was ruined when they had contiguity.

SIR MARTIN CONWAY, M.P., said he disagreed with many of the lecturer's conclusions. Never had he experienced more comfort than when he lived somewhere about the fifteenth or twentieth story. In regard to the view from a high building, it was incomparable: the most beautiful in the world. As regarded floor space he considered that, instead of getting less, one got more as one went higher. It had been suggested that congestion in New York was the result of high buildings. He, however, considered that high buildings were the result of congestion, due to increase of business. No one, he said, proposed to put one high building against another: they must be widely spaced one from the other. Perhaps the main reason why he wanted tall buildings was to prevent London from encroaching on the country.

MR. DELISSA JOSEPH, F.R.I.B.A., said that Mr. Unwin had referred throughout his arguments to higher buildings, and not to sky-scrapers. No one suggested sky-scrapers here, neither were they likely to do so. Higher buildings had no connection with satellite towns; but if commerce continued to grow it must have office accommodation. That accommodation could be obtained by the moderate raising of the height of buildings. If they logically supported Mr. Unwin's theory they were to curtail the development of shops, banks, insurance offices, and general commercial development, for the fear of a troublesome traffic problem getting worse. It was a matter for traffic experts. Let them devote themselves to the problem. They must not let the commercial and industrial development of this



Empire suffer through curtailment of its needs. If Mr. Unwin's forebodings were regarded we should have to bring the forces of London to a standstill.

Finally, they must ask themselves the main motive behind the erection of a building. It was one of profit not that of amenity or æsthetics. A man increased the height of his premises because he wished to increase his business. He remembered some time back the chairman of the L.C.C. Fire Committee said that buildings could not be higher than 80 ft., because that was the limit to which water could be pumped. At the time it had been remarked that "it was grotesque that architecture should be restricted by the height to which the County Council could squirt water."

In conclusion, the PRESIDENT moved a vote of thanks to the meeting, to which Mr. RAYMOND UNWIN briefly responded.

The following are notes from the Minutes of the Council meeting on December 3 :—

R.I.B.A. Examinations.

(*a*) The Board of Architectural Education reports that two candidates had passed the Intermediate Examination in Sydney and one candidate the Special Examination in Cape Town.

(*b*) The Overseas Final Examination qualifying for the Associateship will be discontinued after January, 1924, and in its place the Intermediate, Final and Special Examinations of the R.I.B.A. will be held in the Dominions overseas by arrangement with the Allied Societies concerned.

(*c*) The following schedule of subjects has been laid down for the examination in Professional Practice for students of recognised schools exempted from the Final Examination :—

(1) Professional conduct; duties and liabilities of client, architect, and builder; architect as agent of client; architect as arbitrator.

(2) Forms of contract and contract documents, including general clauses in specifications.

(3) Law of Easements; rights of landlord and tenant, including dilapidations.

(4) Building Acts and By-Laws.

The attention of candidates is drawn to the fact that the time allotted for the optional subject, C.3 (Design), will be increased at all future examinations from four hours to 6½ hours, i.e., from 10 a.m. to 1.30 p.m., and 2.30 p.m. to 5.30 p.m. instead of from 10 a.m. to 2 p.m. as previously.

The Provincial Conference of 1924 will be held at Oxford in July.

Under the provisions of By-law 12, Mr. Alfred C. Bossom was elected a Fellow of the R.I.B.A.

Under the provisions of By-law 24 a Licentiate was censured and suspended for six months for quoting fees lower than those prescribed by the R.I.B.A. scale when applying for appointment as architect to a public authority.

"DIANA OF THE EPHESIANS."

SIR BANISTER FLETCHER, in his lecture at the Central School of Arts and Crafts on December 5, traced the origin of the "Ionic Order" of architecture, as used by the Greeks, more especially in their colonies in Asia Minor. It was slighter and more graceful than the sturdy Dorian, and so it came about that the capital was widened by the addition of the Ionic volute above the echinus and the base was added to the fluted column to supply an appearance of strength.

He discussed the various suggestions, more or less fanciful, as to the downward carving "volute" or curl, which might be studied by Londoners at the British Museum to-day. Some thought its origin might be traced to Nature-forms, such as the twist of the ram's horn, or of the beautiful nautilus shell, which must have abounded on the shores of Greece; others thought it was merely a developed form of the bracket capital of primitive timber architecture; while others, again, turned to the vegetable types of Egyptian capital as the prototypes of this curved form.

Amongst the many temples erected by the Greeks in this order were the two widely-different temples of Nikè Apteros, picturesquely perched on the Acropolis rock, dedicated to Athena in her character as patron goddess of naval enterprise, and that other gigantic building at Ephesus, erected to Artemis, better known as "Diana of the Ephesians." The site of this vast structure might still be traced, but the most striking record of this temple, with its services, its craftsmen, and its surroundings, was that dramatic description in the Acts of the Apostles which vividly portrayed the human interest of those days during the dawn of Christianity. The Erechtheion, a triple temple on the Acropolis, was another beautiful example of the Order, which had been much used down to modern times, and was thus another example of the immortal element which ever persisted in art.

MANCHESTER SOCIETY OF ARCHITECTS.

MR. PAUL OGDEN, speaking recently at the annual dinner of the Manchester Society of Architects, said he was weary of hearing people decry the architectural features of the city. Manchester had been told to remove the Albert Memorial. He would affirm that there was not a better memorial in the country, and it was the work of a Manchester man. A better theatre could not be found than the old Theatre Royal, nor a better art gallery than Barry's building in Mosley-street, and there were many other fine things if people only had the eyes to see and the intelligence to appreciate them.

In regard to the Ministry of Health, he said he was ready to admit that the Ministry had given them open spaces and the valuable Tudor Walters' report. But it had interfered with Manchester schemes in a manner which indicated that it did not know its mind, and he felt bound to say that Manchester could manage these things for itself much better than London.

THE LORD MAYOR (Alderman W. T. Jackson) said he agreed that devolution in such matters was desirable, but when the central authority provided a good deal of the money for building schemes interference of some degree was inevitable. On the general subject of architecture, he said that good architecture as a civic amenity had been somewhat neglected. Most big cities now had an architect's department, and the question arose: What was the legitimate sphere of activity of such a department? Personally, he thought it should be rather an administrative and advisory department than one to which people should look for creative genius. Some time ago, the Manchester City Council rejected the plans of an outside architect for a 'bus garage on the ground that there was a municipal architect who could furnish designs. That did not seem to him wise. It would have been just as reasonable to build an art gallery and then commission one artist to paint all the pictures for it. He was a strong believer in municipal enterprise, but for that very reason he would enlist the best brains in any profession to help any enterprise upon which the municipality was engaged. He did not see why good architecture should not be introduced to a greater extent in domestic buildings. He did not see why a workman's cottage should necessarily be ugly, but almost invariably it was.

MR. J. A. GOTCH (President of the Royal Institute of British Architects) said he had never heard a public man in the position of Lord Mayor make a speech so full of sound common sense on the subject of architecture as that which the Lord Mayor had delivered. He ventured to suggest that Manchester should follow the example of Birmingham and form a civic advisory committee to consider questions relating to the architectural amenities of the city and similar matters.

GOOD AND BAD MANNERS IN LONDON ARCHITECTURE.

AT the second General Meeting of the London Society, held on December 14, Mr. A. Trystan Edwards read a paper on this subject. Sir Charles Ruthen presided. The lecturer, in the course of his remarks, dealt with the nature of urbanity in architecture, and said urbanity was nothing more or less than good manners, and the lack of it bad manners. He contrasted a city of the old-fashioned type, in which public buildings dominated over shops, offices, and private dwellings, with a city in which the social hierarchy no longer obtained. He objected to sky-scrapers overtowering cathedrals and town halls, and to shops with domes and steeples, on the ground that such buildings showed a spirit of vulgar self-assertion which made impossible the dignified aspect of the city as a whole. Many British architects would like to erect sky-scrapers similar to the Tribune Tower, Chicago, but what chance would a Wren building have of asserting itself against such a heavy-weight? The Bush Building, which, when completed, would present a cupola comparable in size to the dome of St. Paul's Cathedral was, he said, a tendency to be deplored. It would eventually oust the dome of St. Paul's from its proud position of pre-eminence. When finished, the dome, from the riverside, would over-top Somerset House and be the most conspicuous thing in view.

The London squares of the Georgian era suggested that the occupants were more concerned to provide restful architectural effects than the tiresome expression of the idiosyncrasies of each separate householder. There was too much tit-bit architecture in those parts of London where the genius of our eighteenth-century forefathers established a great tradition of urban building. Urbanity in architecture consisted not only in the deference which one class of structure might owe to another, but in the deference it should pay to the street of which it formed a part. Another kind of bad manners in buildings, such as disregard for the public, was shown in carelessly designed backs of houses. The convention of blind windows was one of those white lies without which social intercourse was impossible; in fact, architectural good manners—not, perhaps, admirable in itself, but necessary for street buildings.

The lecturer also made reference to the "discourtesy" of many modern commercial buildings, which ignored the scale of the human figure and belittled the passer-by as if with direct intent to make him feel insignificant. Types of modern shops, familiar to Londoners, were contrasted unfavourably with the buildings of old Regent-street. In suffering Regent-street to be destroyed, we had lost the extreme example of good manners in architecture. In conclusion, he expressed the view that the cause of good manners in architecture was best served by a critical public opinion which, through agencies such as the London Society, could powerfully assert itself and ensure that the civic ideal would receive recognition.

In the discussion that followed, Mr. Raymond Unwin said Regent-street was on its way to destroy its value as a shopping centre, and customers were removing to another street. There was profound reality in the fact that, if architecture got too far away from the truth, it would come a cropper in the end. Truth was not inconsistent with good manners. They should learn and recover from the past the way in which architecture should be carried out.

The lecture was illustrated by slides, including views of the Quadrant in Regent-street, and the Harmonic Institution at the corner of Argyll-street.

PLAN COPYING IN BLACK LINES. By H. J. Hall. (London: Sir Isaac Pitman & Sons, Ltd.) Price 2s. 6d. net.

REVIEW OF ARCHITECTURAL WORK IN INDIA, 1918–1921. (Calcutta: Superintendent Government Printing, India.) Price, Rs. 5.

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ILLUSTRATIONS.

Royal Academy Students' Work.

A review of the drawings submitted for this year's Royal Academy Prizes and Studentships was given in our last issue; this week we illustrate a Design for a Railway Terminus, by Mr. J. C. G. Knight (R.A. Gold Medal and Edward Stott Travelling Studentship, £200); and Design for the Decoration of a Portion of a Public Building (Pottery), by Mr. T. D. England (First Landseer Prize (£30) and Silver Medal).

Swansea Masonic Temple Competition.

The design for Swansea Masonic Temple, by Messrs. Willmott & Smith, of Cardiff, was placed first in the recent competition. Mr. Arthur Keen, F.R.I.B.A., was the assessor.

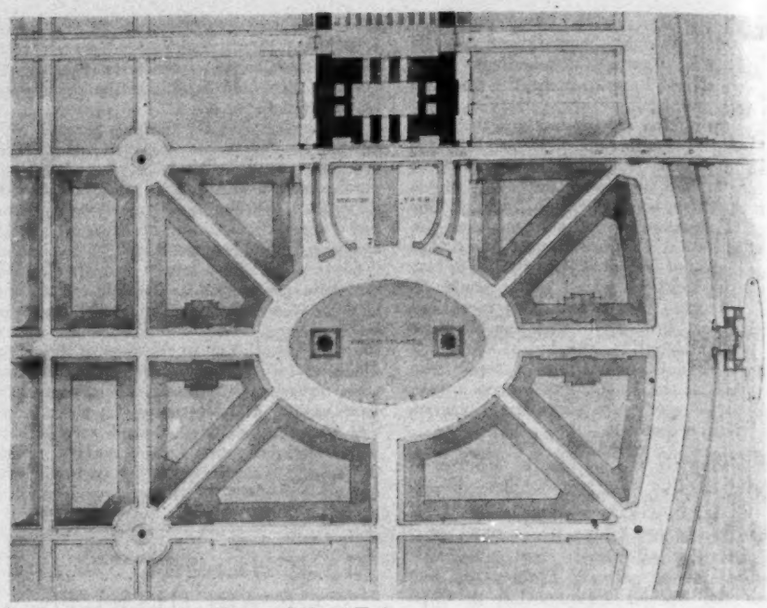
Holy Trinity Church Hall, Hounslow.

The main entrance is from Bulstrode-road and faces south. A staircase leads to the larger hall on the first floor (58 ft. by 40 ft.), which seats 450 persons and could be used for dances as well as concerts, &c. At the farther end of this hall is a raised stage with retiring rooms, &c., for artists. An additional exit at this end is provided by a secondary staircase, giving access on to the Alexandra-road. This staircase is continued to the stage level for the use of the artists. There is a smaller hall (40 ft. by 28 ft.) on the ground floor at the northern end of the building, which is capable of sub-division by a movable partition. Lavatories for both sexes are placed in suitable positions for use in connection with both halls, and service is provided by means of a kitchen in close communication with the secondary staircase.

In addition, there are four large classrooms which can on occasion be alternatively used as cloakrooms. The building will be heated by means of hot-water radiators and pipes.

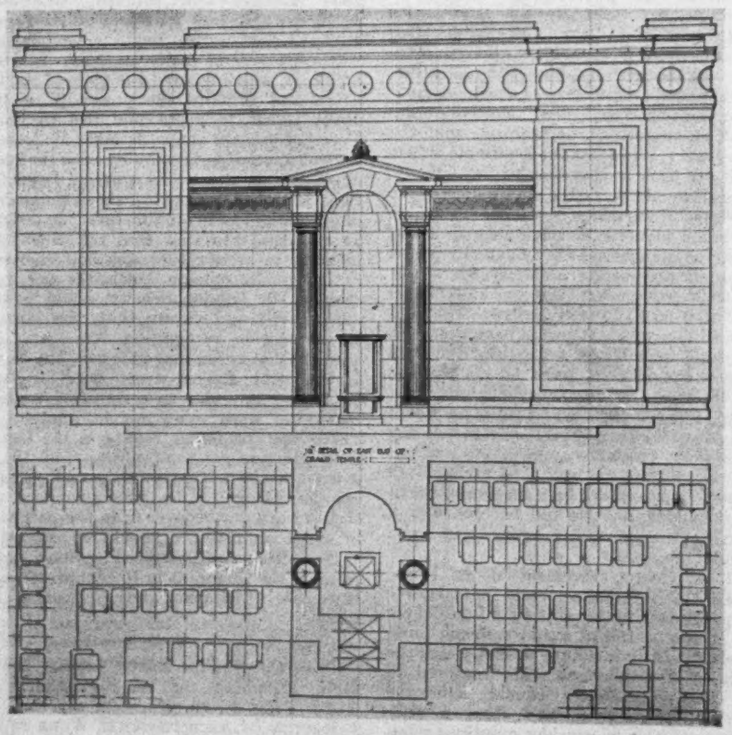
Considerations of economy have dictated a style of formal simplicity both in plan and elevation. Ornament has been avoided, and an attempt has been made to obtain architectural effect by the inter-relation of the main features of the composition. The walls are to be faced with picked London stock bricks, the interior of the walls being of Fletton bricks finished fair face and distempered. The roofs will be supported by steel trusses 10 ft. apart and covered with double Roman tiles.

This design, by Mr. Cyril A. Farey, A.R.I.B.A., was selected by the assessor, Mr. Walter Tapper, in the recent limited competition.



Royal Academy School of Architecture Students' Work.

Design for a Railway Terminus. By MR. J. C. G. KNIGHT.
Awarded R.A. Gold Medal and Edward Stott Travelling Studentship (£200).



Swansea Masonic Temple Competition.
Design Placed First: By MESSRS. WILLMOTT & SMITH.

House at Nunthorpe, Berkshire.

This house is being built in the village of Nunthorpe, some nine miles from Middlesbrough, and occupies a site looking on to some of the most beautiful peaks in the Cleveland Hills. All the principal living-rooms are arranged on the south front with a view towards these hills, the kitchen wing and garage, &c., occupying the north-east corner. The house is built of local sand-faced bricks and hand-made sand-faced roofing tiles.

The feature of the plan is the hall-living-room, with the drawing-room and dining-room opening off it. All the domestic offices are screened by a high wall, towards the garden front, which is terminated by the garage roof, forming a good protection from the north-east winds. The main staircase and all floors to ground-floor living-rooms are in oak.

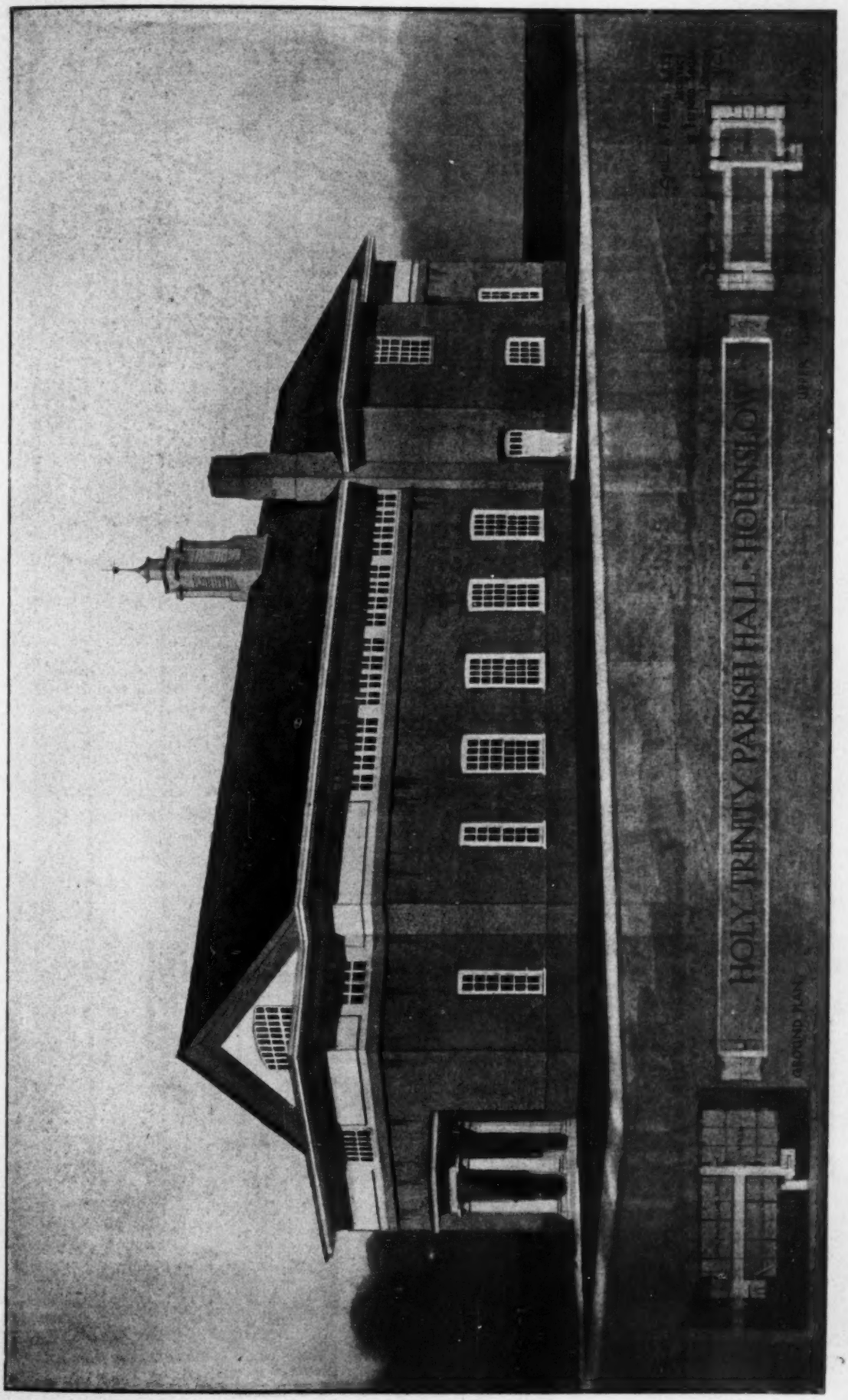
The house is being built by Messrs. Goodrum & Tapster, of Middlesbrough. The bricks are supplied by the Eaglescliffe Brick Co., and the tiles are hand-made "Rosemary."

Messrs. Adshead & Ramsey, FF.R.I.B.A., are the architects.

New Premises, Wimbledon.

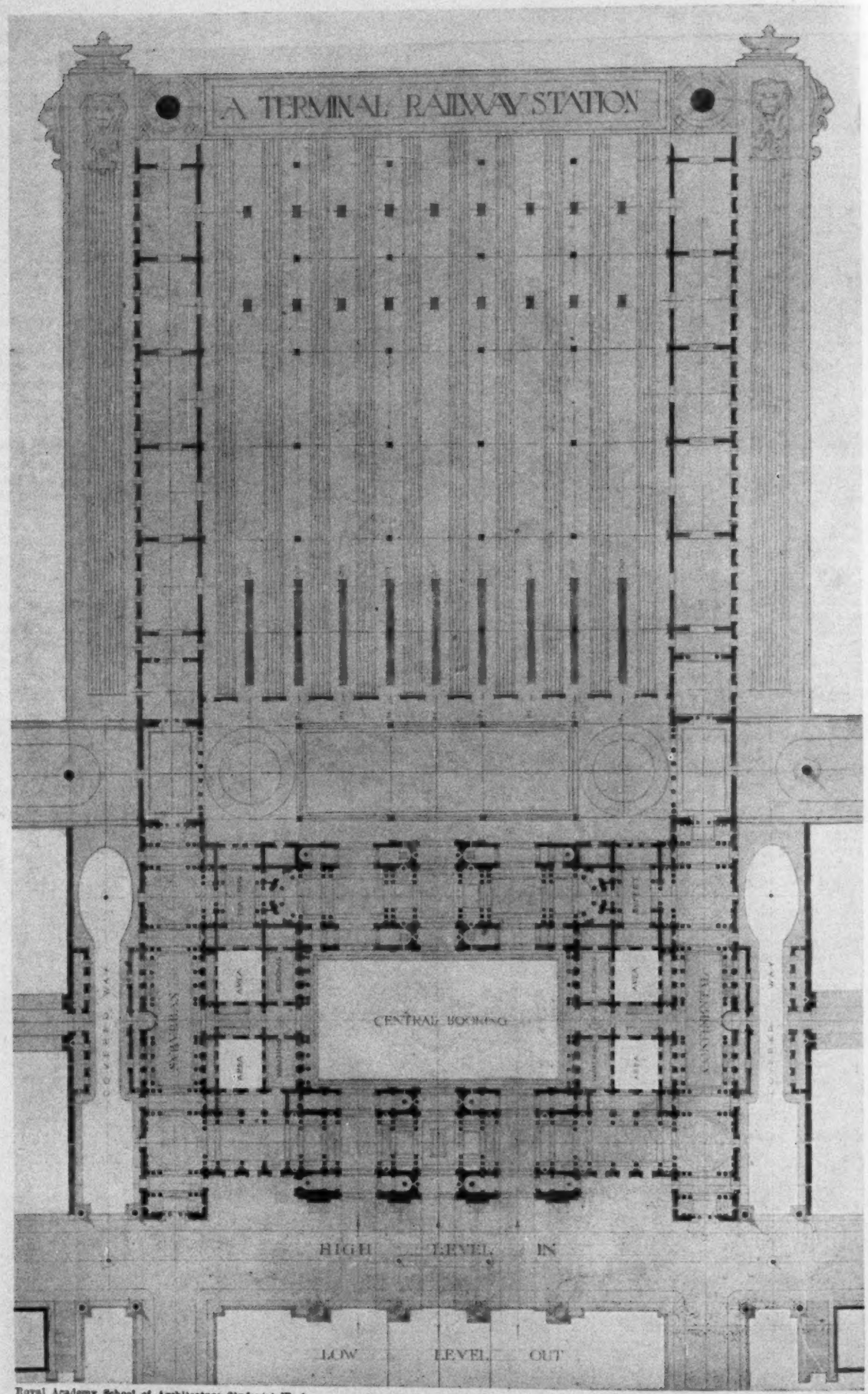
The illustration on p. 961 is of a new drapery establishment for Messrs. Elys, at Worple-road, Wimbledon. This is an extension of their present premises facing Hill-road, and united thereto. The joint architects are Mr. C. Hamilton Simpson, F.R.I.B.A., and Mr. Henry W. Burns, F.S.I., and the quantities were prepared by Mr. A. J. H. Sprague, F.S.I.

The general contractors are Messrs. A. Roberts & Co., Ltd., of Kensington; metal shop front by Messrs. Griffiths Bros., Christchurch; floors by Messrs. Fram, Ltd.; central heating by Messrs. Durbin & Katesmark; artificial stonework by Messrs. F. Bradford & Co.; steelwork by Messrs. H. Young & Co.; metalwork by Messrs. Jas. Gibbons, Ltd.; ornamental glazing and top-lights by Messrs. Luxfer; electric light wiring by Messrs. Miskin & Rice; asphalte by Messrs. Thos. Faldo & Co., Ltd.



Holy Trinity Parish Hall, Hounslow.

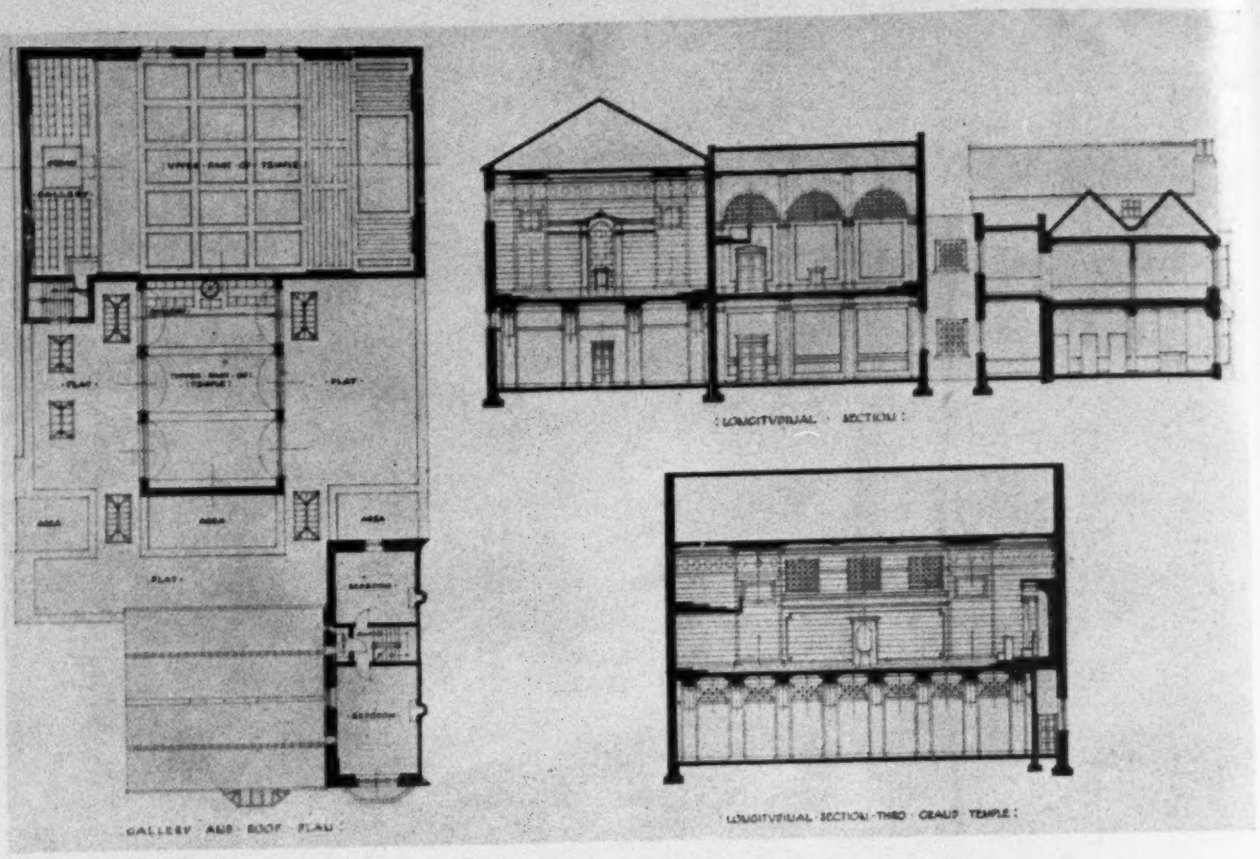
MR. CYRIL A. FAREY, A.R.I.B.A., Architect.

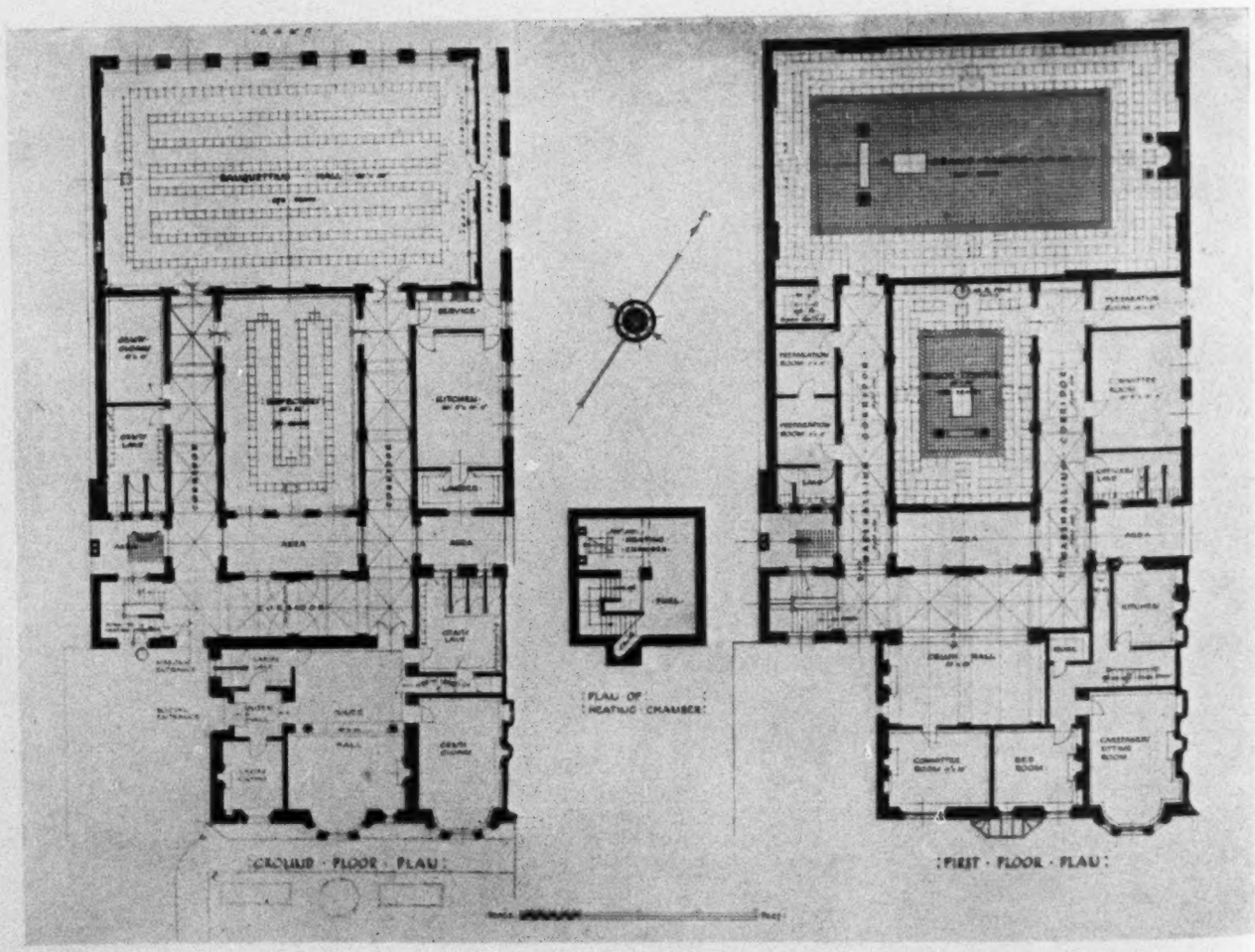


Royal Academy School of Architecture Students' Work.

Design for a Railway Terminus. By Mr. J. C. G. KNIGHT.

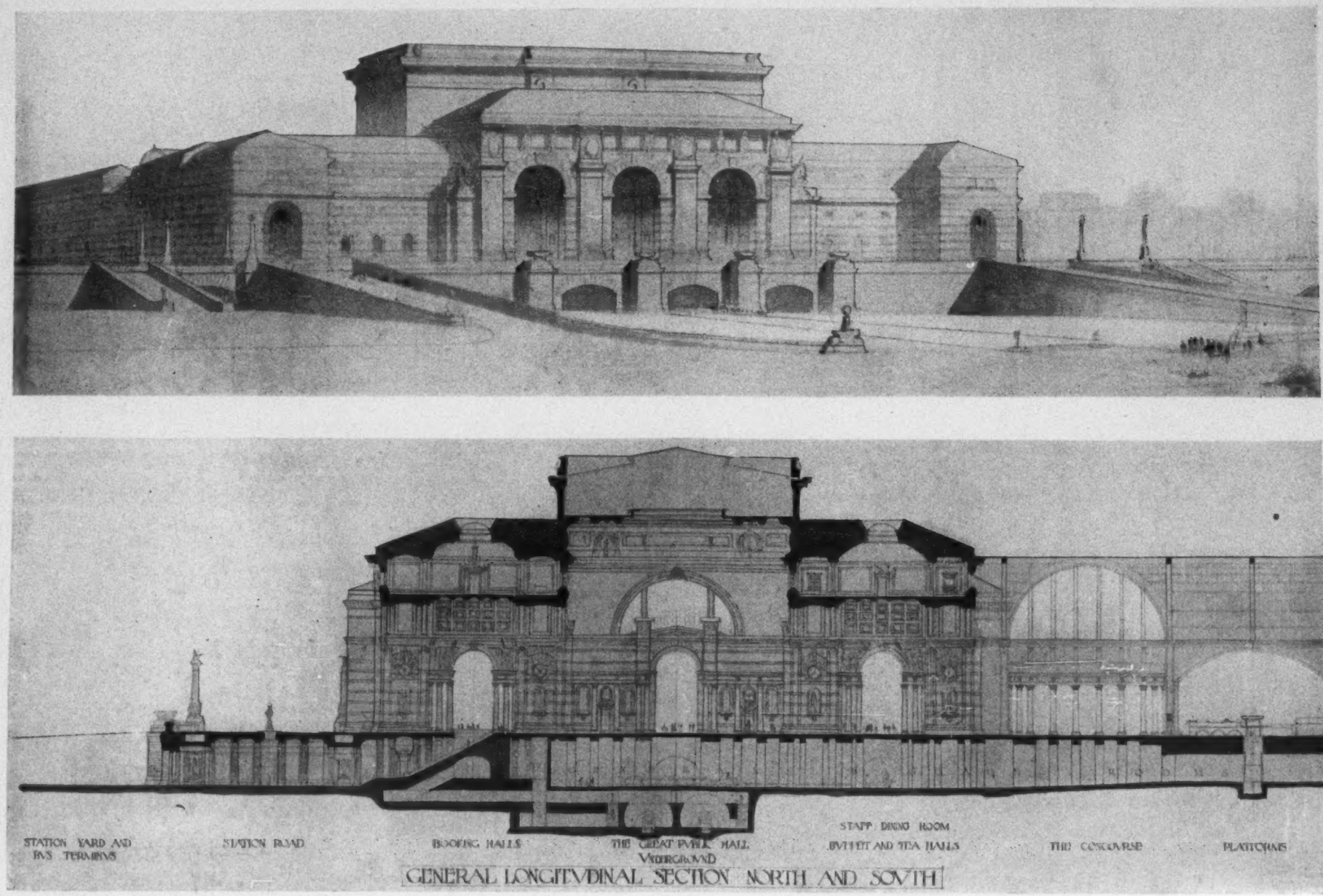
Awarded R.A. Gold Medal and Edward Stott Travelling Studentship (£200).





Swansea Masonic Temple Competition.

Design placed First: By Messrs. Willmott & Smith.



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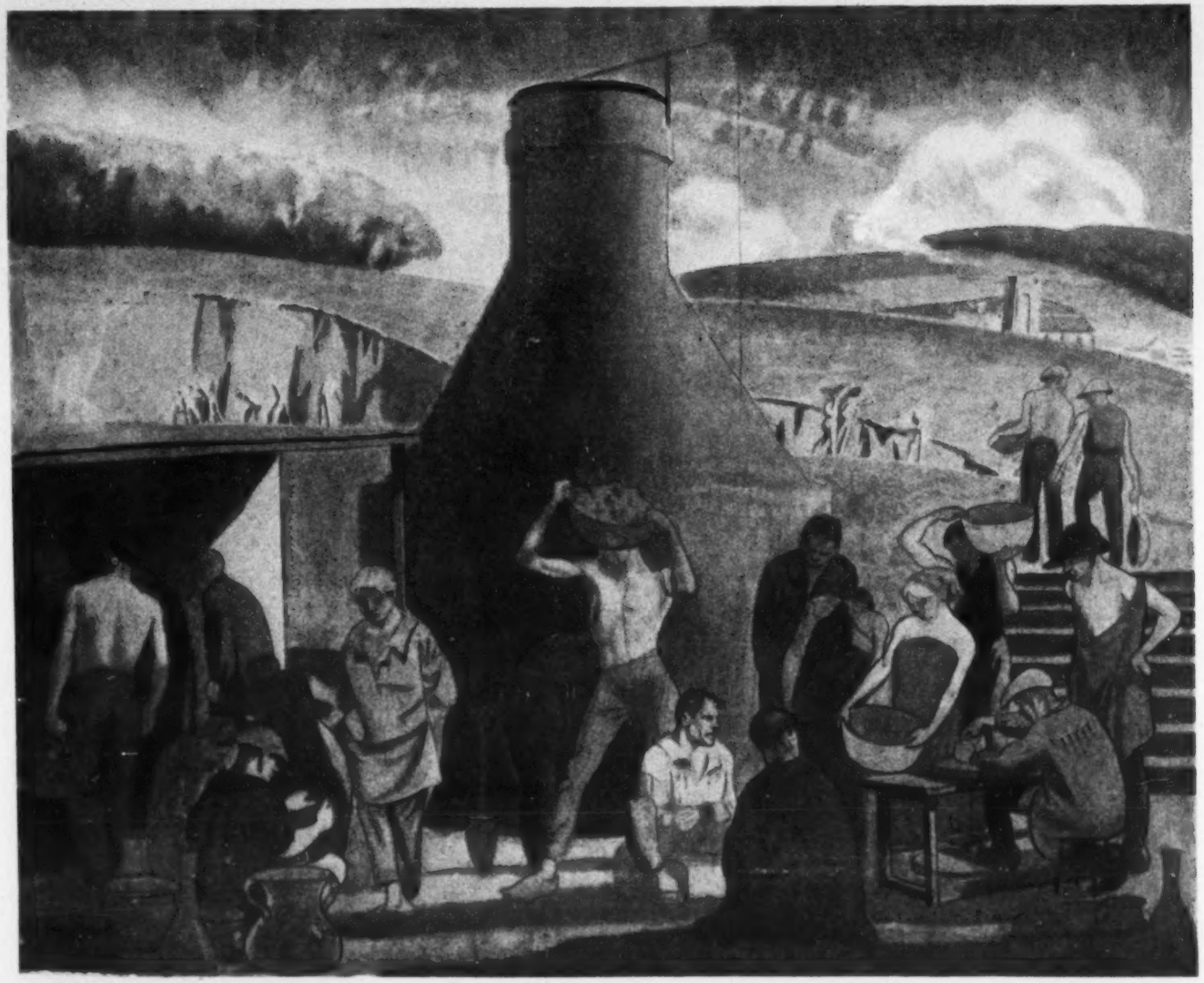


Royal Academy Students' Work.

Design for the Decoration of a Portion of a Public Building: Pottery. By Mr. T. D. England.

[Awarded First Landseer Prize (£30) and Silver Medal.]

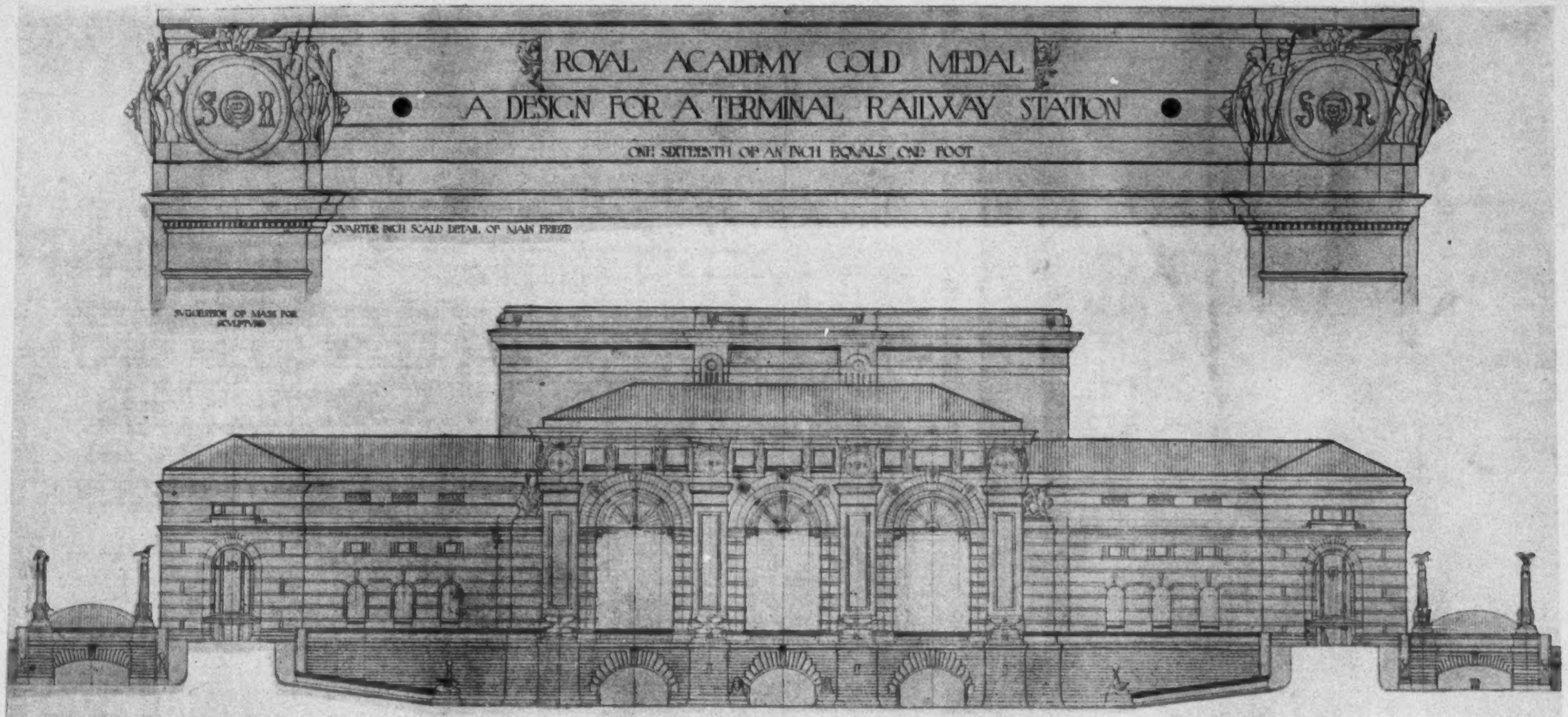
ROYAL ACADEMY GOLD MEDAL

A DESIGN FOR A TERMINAL RAILWAY STATION

ONE SIXTEENTH OF AN INCH EQUALS ONE FOOT

QUARTER INCH SCALE DETAIL OF MAIN FRIEZE

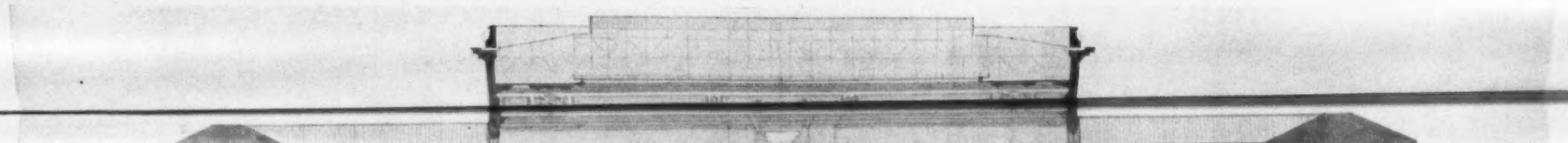
SUGGESTION OF MASK FOR SCULPTURE

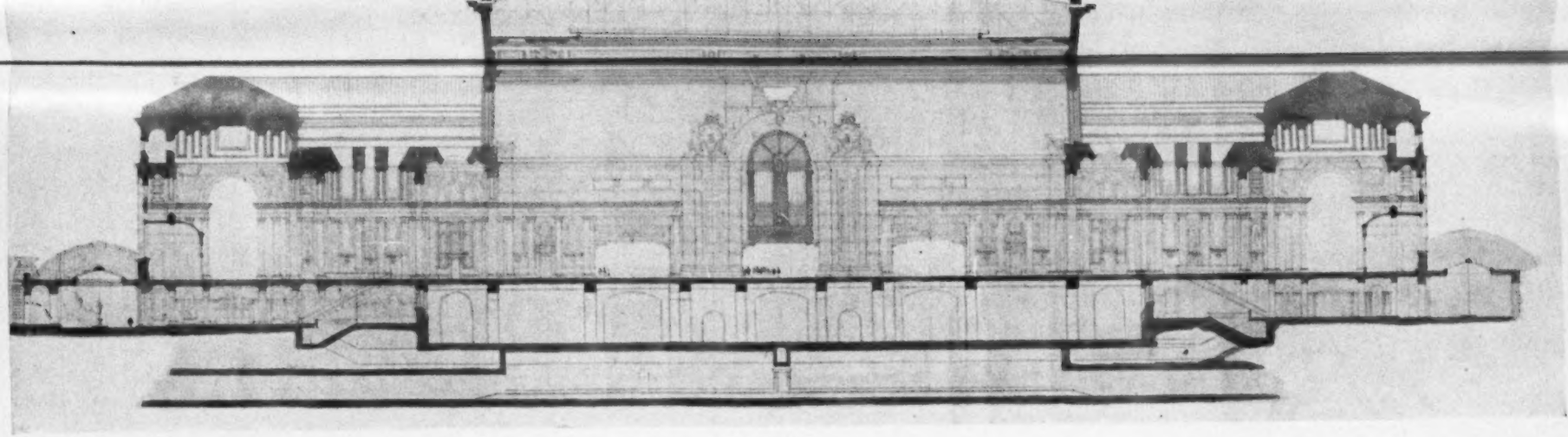


SUBURBAN ARRIVAL SUBURBAN MAIN ENTRANCE FROM STATION ROAD CONTINENTAL MAIN LINE & CONTINENTAL ARRIVAL

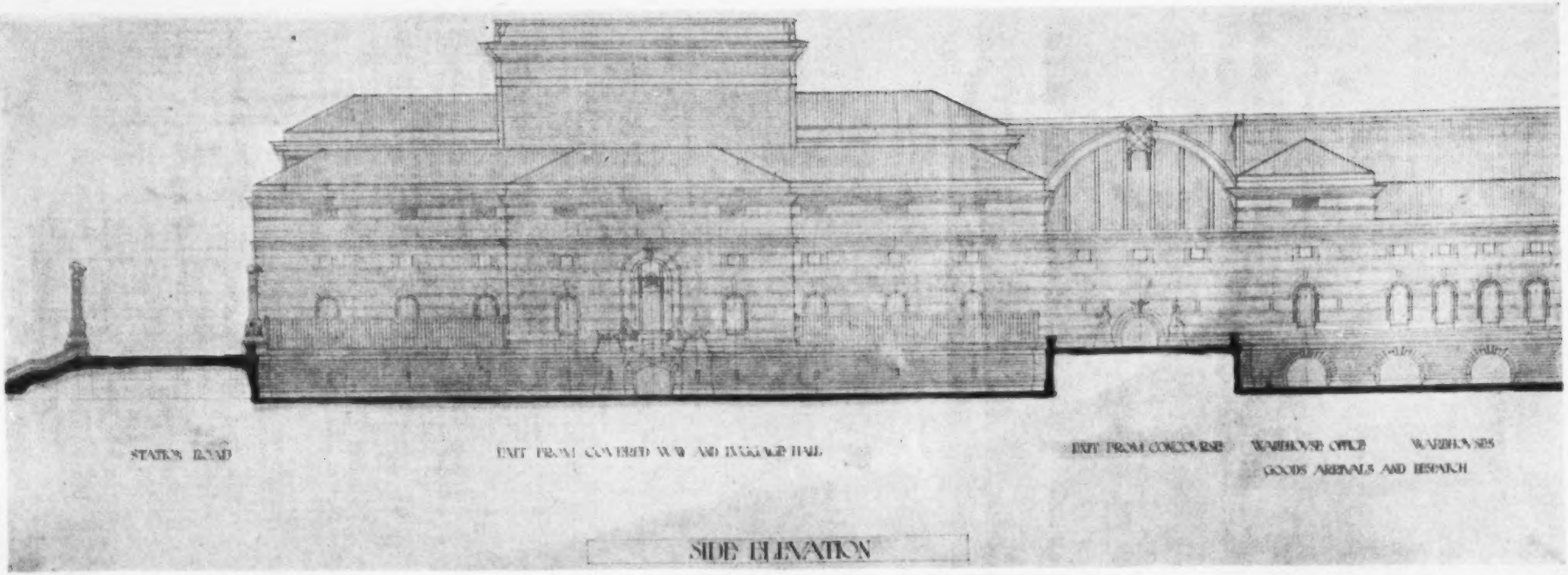
BAGGAGE ENTRANCE AT LOWER LEVEL BAGGAGE

PRINCIPAL ELEVATION TO PUBLIC PLACE





TRANSVERSE SECTION.



SIDE ELEVATION

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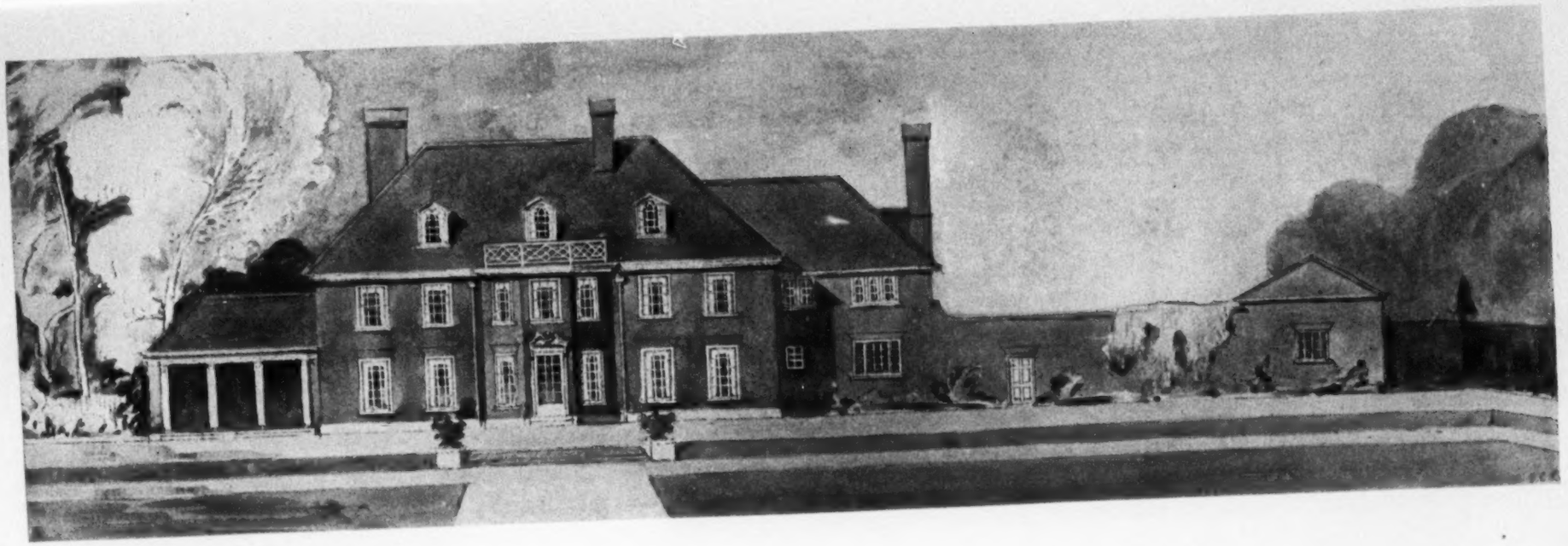
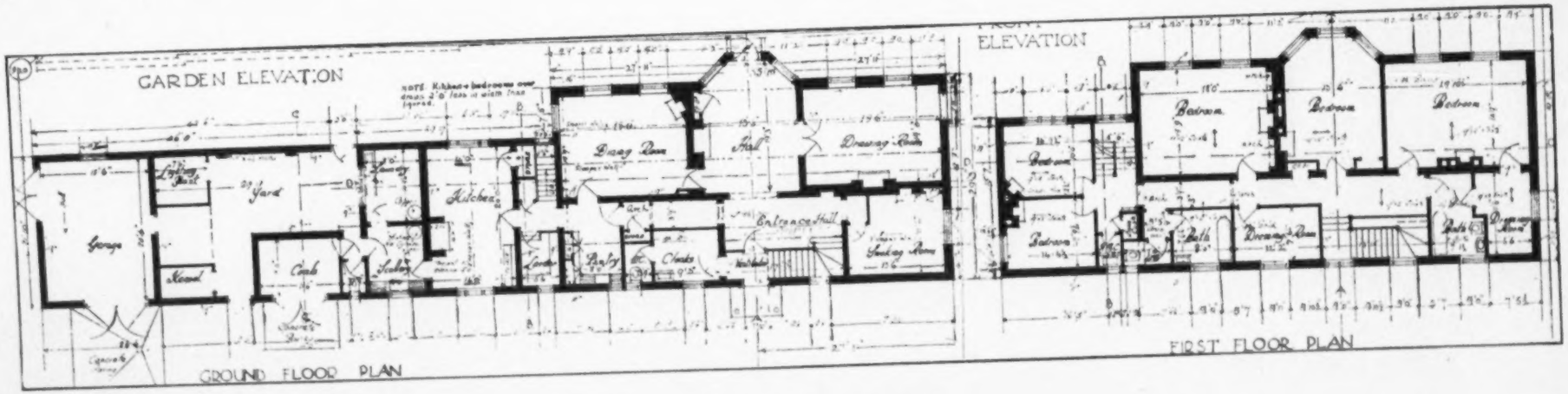
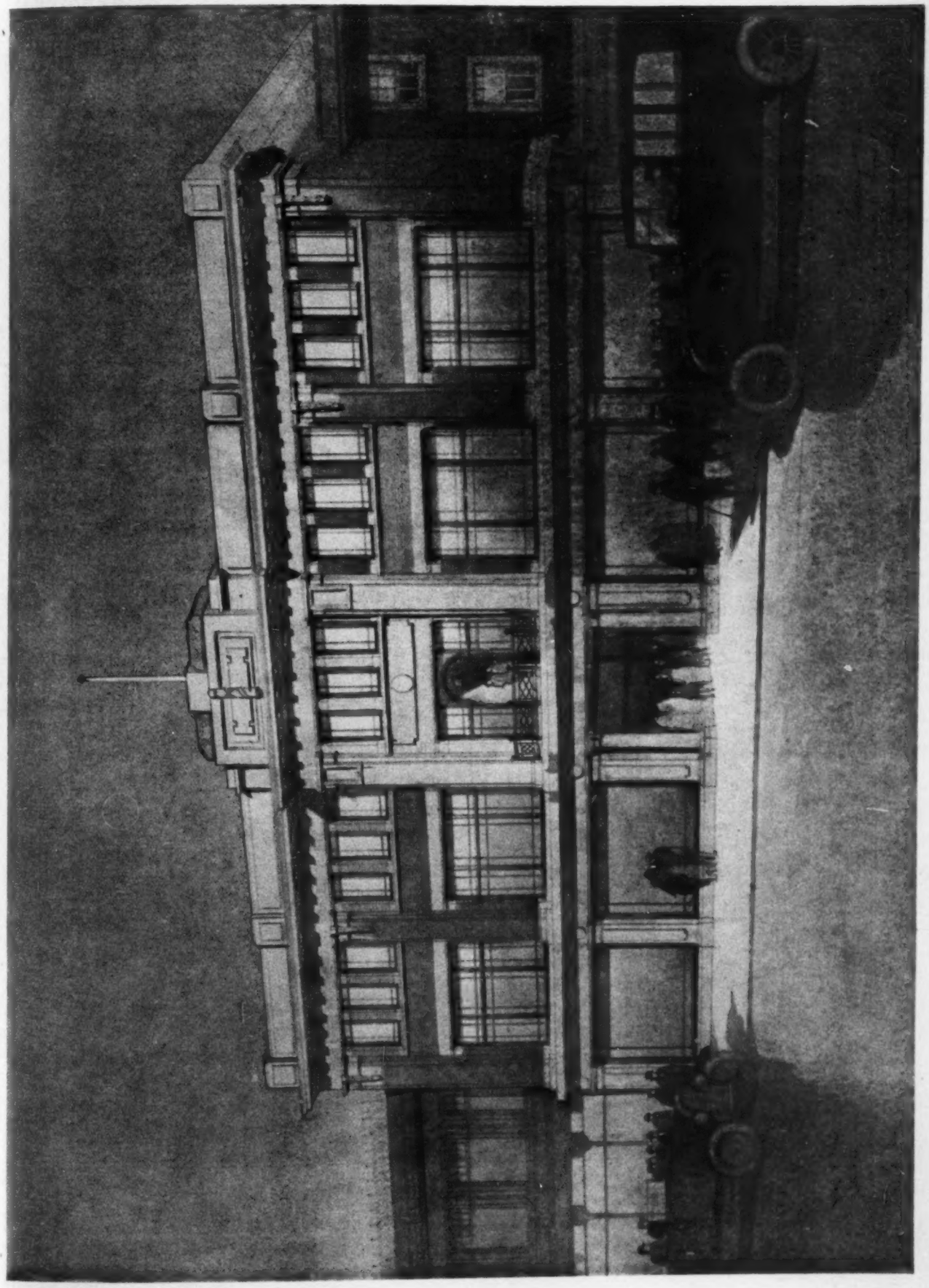


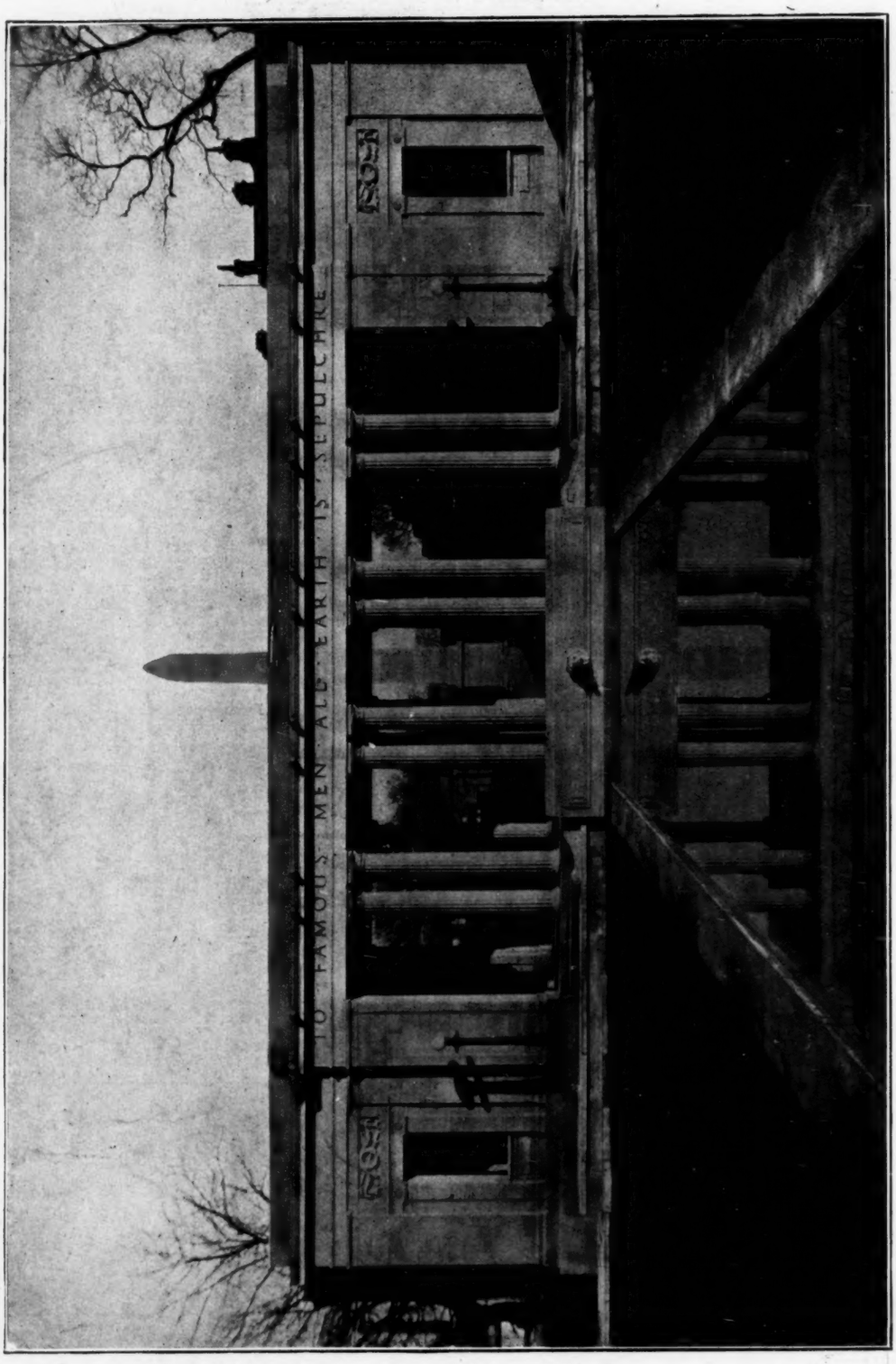


House at Nunthorpe, Yorkshire.

MESSRS. ADSHEAD & RAMSEY, FF.R.I.B.A., Architects.

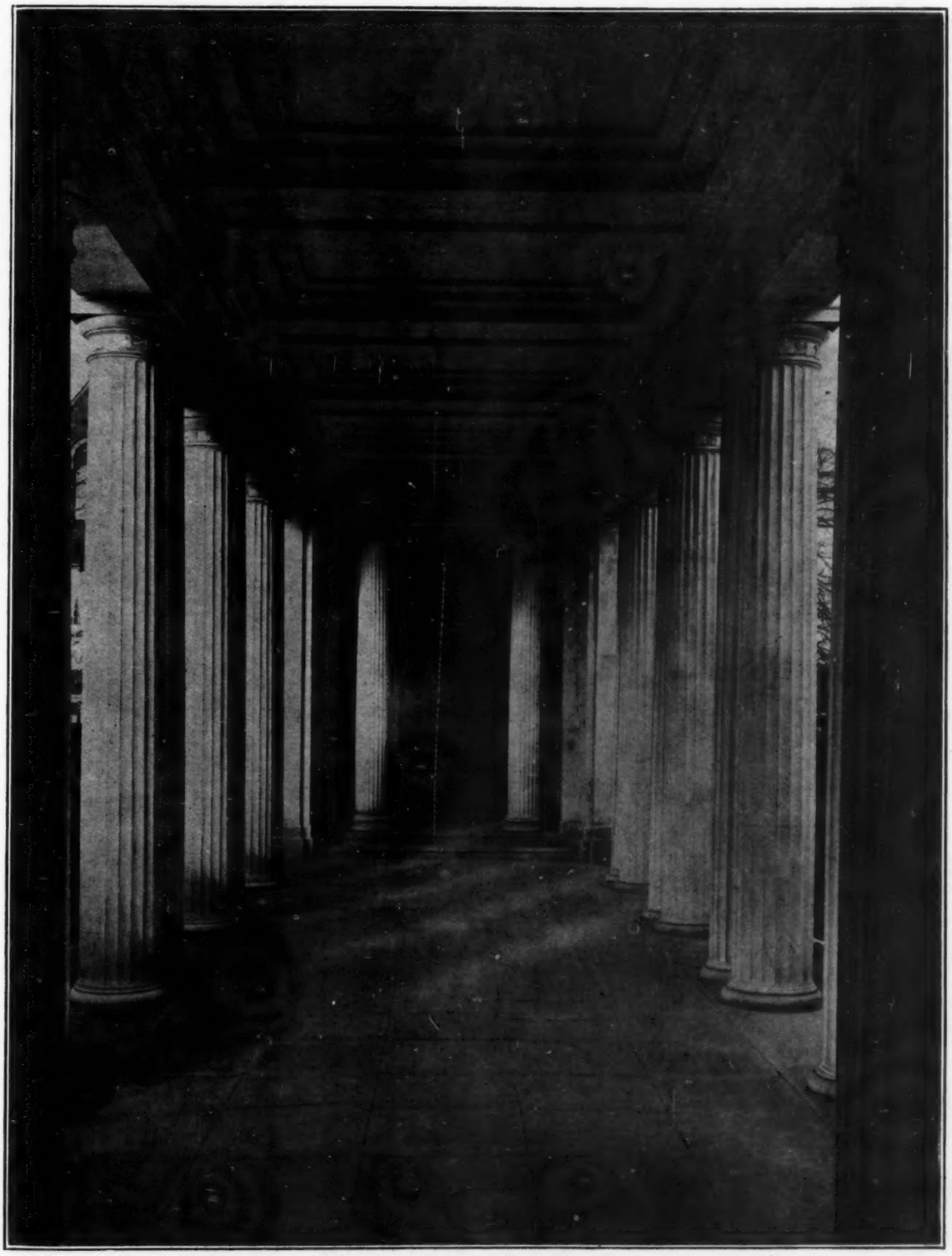


New Premises, Wimbledon. MR. C. H. SIMPSON, F.R.I.B.A., AND MR. HENRY W. BURNS, Joint Architects.



Southport War Memorial: The South-West Colonnade and New Water Garden.

MESSRS. GRAYSON & RARNISH, FF.R.I.B.A. and MR. A. L. MCMILLAN, A.R.I.B.A., Joint Architects. (*See p.* 964.)



Southport War Memorial: The South-West Colonnade

MESSRS. GRAYSON & BARNISH, FF.R.I.B.A., AND MR. A. L. MCMILLAN, A.R.I.B.A., Joint Architects. (*See p.* 964.)

SOUTHPORT WAR MEMORIAL.

THE Southport War Memorial was unveiled on November 18 by the Earl of Derby. The joint architects are Messrs. Grayson & Barnish, FF.R.I.B.A., of Liverpool, and Mr. A. L. McMillan, A.R.I.B.A., of Southport, whose design was accepted in an open competition assessed by Sir Reginald Blomfield, R.A., in 1919. A connecting link between the obelisk and the gardens and the approach to the cenotaphs is formed by the open colonnades, which also emphasise the symmetrical lay-out of the square. The colonnades, formed with coupled Doric columns, have coffered ceilings. By the Ionic columns which mark the approach to the cenotaphs is a series of flags fixed to ebonised teak standards, and secured by bronze brackets. The apex of the obelisk is 67 ft. 6 in. above the flagging, the upper portion being 87⅞ diameters high.

EXHIBITION NOTES

OLD DRAWINGS AND PRINTS.

In the pleasant galleries of Messrs. Ellis & Smith, Grafton-street, is an extremely interesting exhibition of old drawings and prints of old London, which cannot have been got together without much careful effort. Notwithstanding the doubtful drawing and somewhat mechanical handling of many of the pictures, they have an undeniable charm. Sometimes the drawing of architecture by Rowlandson is so bad that one wonders how so able an artist could see it so badly, yet in his "Grand Improvements at Westminster" the figures and buildings are so intimately allied that a very charming drawing results and we forget to criticise the buildings. James Malton, Thomas Sandby, George Shepherd and Joseph Farrington made illustrations which remain of real value. Of these, Malton was the most remarkably sound and reliable—he would never have drawn the abutment columns on Waterloo Bridge with volutes as in the Farrington drawing. There is a fine aquatint of his "New Palace Yard" and the view of "Saint Paul's," of "St. Peter-le-Poor," and "Covent Garden" are amongst his best. The view of what Charing Cross was, as depicted by George Moore in his statue of Charles the First, shows how charming a picture it was compared with the dull mixture we see to-day, which only needed foresight and breadth of treatment to have become one of the finest civic centres in the world. To-day we have lost the old charm of the picturesque without obtaining the breadth and dignity which might have been some sort of compensation.

SWEDISH ARTS AND CRAFTS.

The Swedish Arts and Crafts Exhibition at the Grieves Gallery is worth seeing. A noticeable feature is the refinement of detail in the silver work, but in the fabrics there is much that seems crude and needlessly archaic. The pottery and glass are interesting, but we regret wood-carving was not included in the subjects.

"VICTORY." "MOURNING."

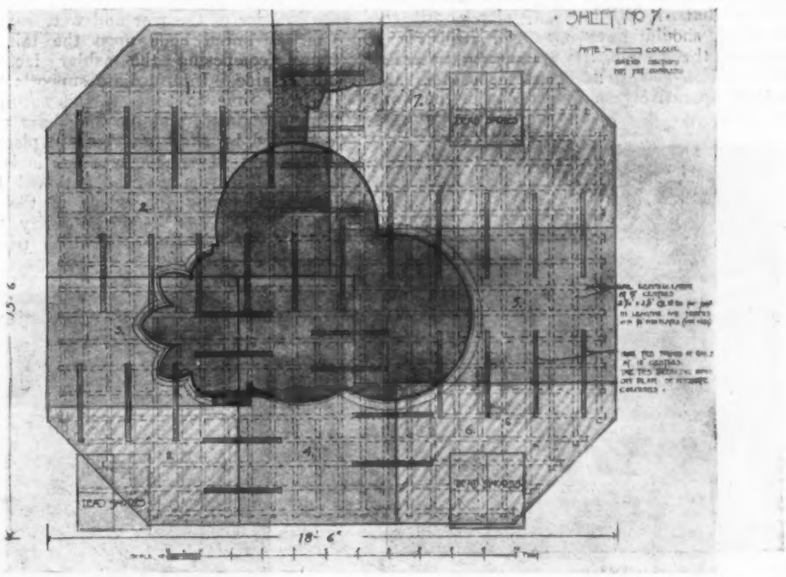
Panels on the Southport War Memorial.

MESSRS. GRAYSON & BARNISH, FF.R.I.B.A., AND MR. A. L. MCMILLAN, A.R.I.B.A., Joint Architects

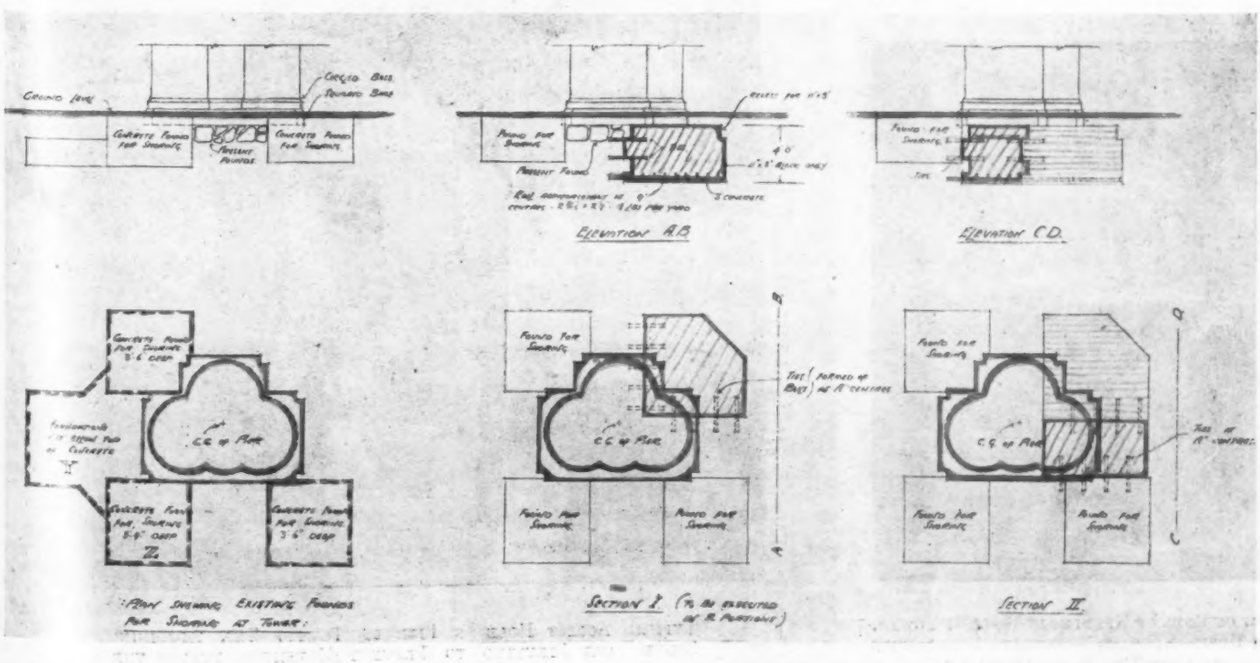
JEDBURGH ABBEY.—II.

BY WILLIAM HARVEY.

The threading of the needles through the shattered walls of the tower demanded great caution, and a plan of operations was carefully made out before any stones were withdrawn. Although it was extremely desirable to avoid burdening the old piers, the state of the tower walls was such as to make it impracticable to cut needle holes until the surrounding masonry had been consolidated with cement grout. After the erection of the raking shores to the tower and centering to its arches, but before any needling could be commenced, the process of washing out joints and inserting cement was put in hand. The process involved a great deal of anxiety as the temporary timber supports could not be expected to relieve the fractured piers to any great degree, and the weight of cement required to fill the starved joints at this part of the masonry was considerable. The piers showed continual signs of movement under the altered conditions and added load. Tell-tales placed across the old cracks fractured again and again after being renewed, and demonstrated the precarious state of the ruined building. When the process of consolidation had proceeded as far as was deemed advisable in view of the conflicting requirements of the case, the holes for the needles were cut in successive small stages, with all the precautions used in tunnelling operations. The sides of the excavation were made good in hard Hailes stone set in cement as the work proceeded. The outer stones, which had perforce to be removed, were numbered in accordance with diagrams and photographs previously prepared, and were reserved for rebuilding in their proper positions after the needle should have been withdrawn again. The tops of the tunnels had to be made sound enough to communicate the support from the needles to the upper parts of the tower, and this was performed by inserting specially shaped steel plates as lintols from side to side of the opening with their ends bearing upon the Hailes stone linings at the sides of the tunnels. Each lintol was wedged up tightly to the underside of the old work before the next section of the tunnel was proceeded with, and the height of the tunnel was diminished as its length increased so that each succeeding lintol was placed at a rather lower level than that next to it. This device permitted of access to the irregular space between the lintol and the old work above for wedging and tamping in each case. When the tunnels were completed the rolled steel joists were slipped into position, and the space between their top phlanges and the undersides of the steel lintols was built up solid with wedges and small stones set in cement. This packing was rammed in so tightly as to produce a noticeable deflection in the needles since it was considered essential that they should actually carry the load before any operations could be started upon the piers below. Even with the needles in position and the piers relieved of the heaviest part of their load their condition was not such as to inspire confidence. Bulging and split, with the facing stones fractured and the internal rubble core in a powdered and disintegrated state, they had still to support the weight of their own masonry to the height of over 40 ft. above ground level. Some further work of consolidation was put in hand in the tower walls around the position of the needles to guarantee that the work should not break away piecemeal or settle unequally and affect the piers. It was also necessary to see how the gantry behaved under the load before attempting any work between the needles and the ground. These precautions were completely justified by the facts which were revealed in the process of the repairs. The cracks and movements which showed themselves on the wall face were but symptoms of more serious defects within, for, in addition to fractures and starved joints, large



PLAN OF NORTH-WEST PIER: SECTIONS 1 TO 5 OF NEW REINFORCED CONCRETE FOUNDATIONS WERE PLACED IN POSITION BEFORE THE TEMPORARY DEAD SHORES WERE REMOVED.



REINFORCED CONCRETE FOUNDATIONS TO PIER OF TOWER: PART OF A DIAGRAM PREPARED TO SHOW THE ORDER OF OPERATIONS.

Jedburgh Abbey: Underpinning Tower Piers.

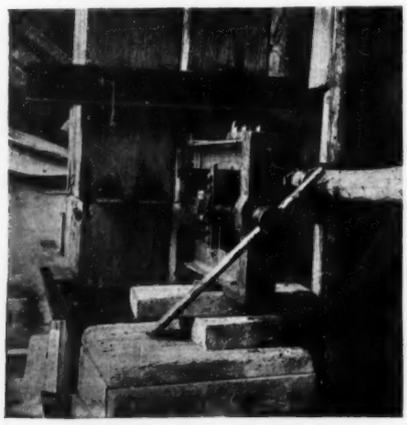
[The photographs and drawings, except where otherwise stated, illustrating this article are published by permission of H.M. Office of Works.]

cavities were found in the centre of the wall, where old wall passages had been hidden in the course of fifteenth-century repairs without being filled in or having the earlier work properly bonded to the later.

Preparatory to actual recoring works a method of operations was devised, and the limits of each stage in the proceedings agreed upon. Special material was prepared to hand in the shape of screw jacks, steel bar lintols, steel and oak wedges, and short ends of steel rails, and it was made a principle of the operations that whatever was removed from the building should be immediately replaced by something stronger than itself. Each step in the proceedings was directed by this leading idea, and the several successive stages of the work were both thought out and carried out in such a manner as would tend to the prompt insertion of some suitable alternative support placed where it would not interfere unduly with future operations. If once a movement began while the piers were under treatment there was a very unpleasant probability that it would not stop until the material should have arranged itself in a heap on the ground. It was imperative that every action should be smartly executed, and only comparatively small portions of the work were undertaken at any one time. The number of skilled men who can be found for such work is necessarily limited, and space does not permit of hustling methods, nor can the mason in charge of the operations be made responsible for the supervision of too extended a field where so many details all vitally important to the safety of the monument, his own safety, and that of his men, demand his personal attention.

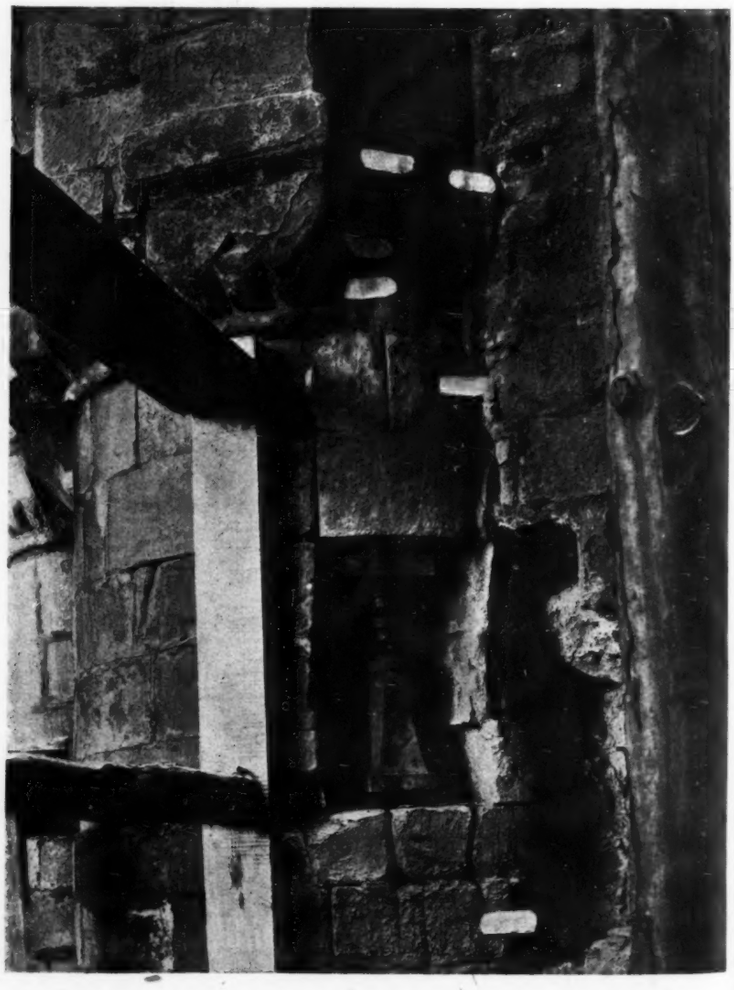
The first cut was made in the north-east pier early in February, 1915, when a small opening was made by the removal of a few facing stones, and the insertion of a pair of jacks and a steel lintol. The lintol was kept down sufficiently far from the top of the opening to admit of the insertion of steel bars between lintol and stone, and each stone was picked up on folding wedges supported by the steel lintol. The steel bars were used as ceiling joists to the cavity in process of excavation in the heart of the pier, and were pushed forward as the work of excavation advanced until they ultimately stretched right across the interior of the pier and were supported at their advanced ends upon the tail ends of stones composing the ashlar facing of its further side. Intermediate supports were put in from time to time as the nature of the work demanded, and the long bars were supplemented by short crossbars in places where the ceiling of rubble was particularly bad. How bad it was may be gathered from the fact that during the whole of the recoring operations it was never necessary to use a tool to dislodge the core which trickled out to meet the masons until at the end of the recoring work the masonry near the steel needles was reached where the repairs already executed provided a sound roof for the first time.

The sectional area of the plan of the pier was divided into four quarters, and only one-fourth was excavated at once. An entrance having been made, as already described, the direction of the excavation was slanted to one side and the left-hand portion of the pier hollowed out completely for a height of about 3 ft. until the cavity was bounded on three sides by the tail ends of the ashlar facing stones and on the fourth side by the remaining mass of rubble core and the small vestibule hole for access. While the roof of the excavation was upheld by the steel bars, jacks, and props which had been placed in position as the core was removed, the interior was carefully cleaned of dust, washed, and the tail ends of the ashlar facing stones coated with cement grout to ensure the adhesion of the new concrete. Steel reinforcement bars ½ in. diameter were then placed in position with hooked ends buried in small holes groped for them in the vertical face of the existing rubble core to provide for connection to the adjoining mass of concrete when it should come to be inserted. The concrete was composed of Whinstone broken to pass a 1-in. ring, 3 parts; clean gritty sand, 1½ parts; and Portland cement, 1 part. In addition to the provision of reinforcement bars bond was arranged between the blocks of concrete by forming a step or ledge in the rubble face of



APPARATUS FOR RELIEVING SHORES OF THE WEIGHT OF THE NEEDLES. THIN STEEL WEDGES WERE INSERTED IN SAW CUTS AND WITHDRAWN BY THE USE OF A SCREW PRESS.

VIEW OF ENDS OF NEEDLES IN WALL OF TOWER. THE UPPER NEEDLES PENETRATE CORNERWISE TO GRIP TWO WALLS EQUALLY.



TYPICAL ACCESS HOLE IN PIER OF TOWER. THE ADJOINING STONES ARE STRUTTED TO PREVENT MOVEMENT DURING THE RECORING OPERATIONS.

Jedburgh Abbey Church: Recoring of Piers of Tower

the core against which the concrete was deposited. To ascertain the degree of success that had attended the process of consolidation a specimen of concrete was cut out with a fragment from the back of one of the facing stones firmly embedded in and adhering to it. When the first mass of concrete had been successfully rammed home and allowed to harden a second portion of core was excavated on the other side of the pier, and when the concrete had been deposited there the remaining central mass of core was removed and the two great blocks of concrete incorporated together by means of a third mass deposited in the space between them. The hooked ends of the reinforcement bars came into view again as the intervening mass of rubble core was removed, and connection was made with other bars made with hook to hook. Progress was necessarily slow, as each concrete block had to set before adjoining parts could be proceeded with. A slight delay occurred through the sinking of a boat which struck a mine while bringing cement for the works.

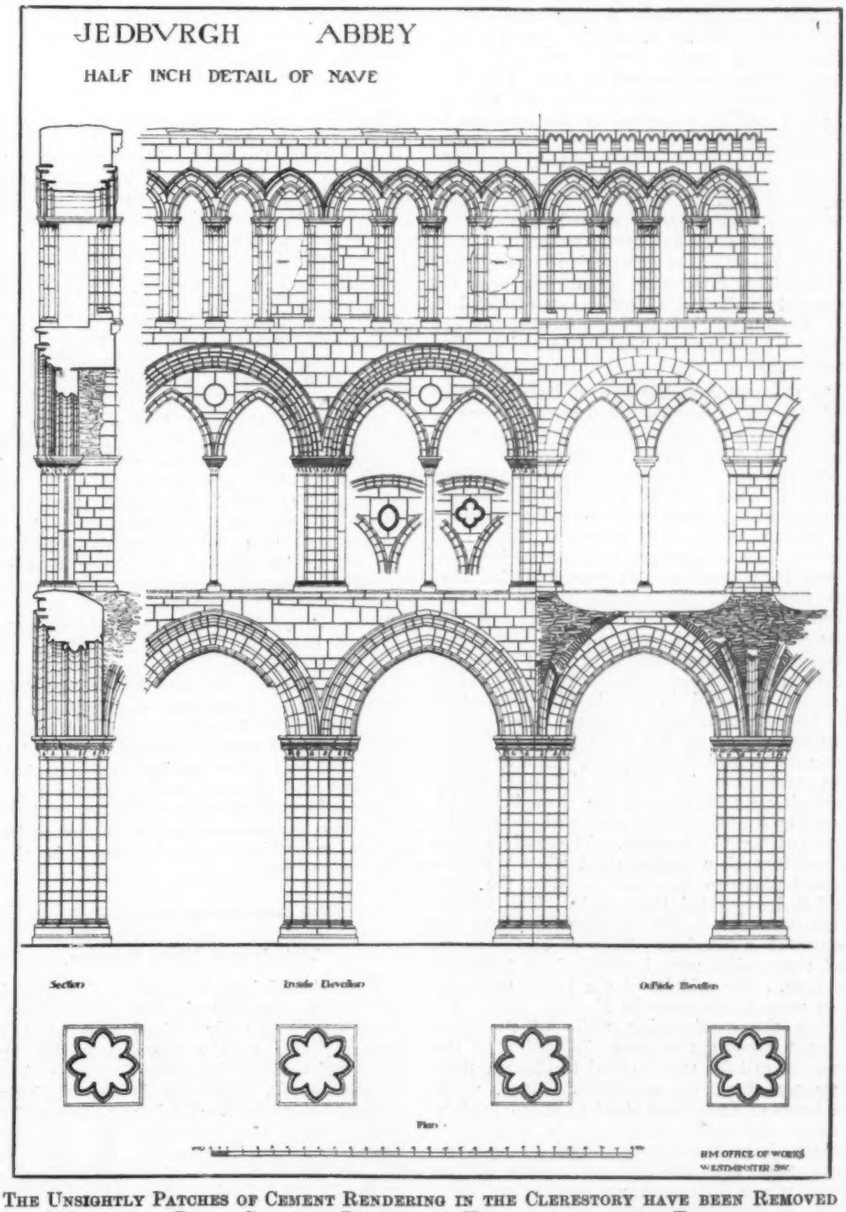
By the end of May, 1915, nearly four months after the first cut had been made, the north-east pier had been recored up to the level of the springing of the tower arches. The core here was found to be extremely loose and disintegrated, and the work was carried on upwards and outwards over the north arch. As had been the case in the interior of the pier, the ashlar was found to have been split in all directions, and it was necessary to insert copper cramps to save the fragments of voussoirs that were in danger of falling away piecemeal. Steel reinforcement was used in the haunches of the arch to connect the masses of concrete, and some rather heavier sections of steel were inserted to take up part of the shearing stress which had shown its dangerous effects in the fractured capitals and voussoirs near the springing of the arch. Throughout the work the ashlar facing stones were found to have been wrought only for a distance of 2 in. or 3 in. from the face, and to have been roughly dressed to a pointed form where they tailed into the core. This " scamping " of the beds doubtless contributed to the bulging of the piers while the interior was formed of indifferent lime rubble; it is, perhaps, no defect now that the piers are packed with excellent cement concrete since the space between stone and stone allows the infilling to penetrate from the interior to within a few inches of the exterior face of the piers.

Work upon the north-west pier was commenced on May 8, 1915, and proceeded steadily until a year later the recoring had reached well out over the arch, and was connected up to the concrete already deposited in the eastern half with a large keystone or crown block of concrete. This block had for its upper boundary the portion of the tower wall that had been consolidated when the steel needles were inserted. On each side it was bounded by the masses of concrete, replacing the old disintegrated core, and beneath it were the old Norman voussoirs, or rather the fragments of them which had survived the racking movements in the arch. They were retained in position with the help of copper cramps, and still form part of the structure although the core of reinforced concrete is now so continuous as to form a complete weight-carrying frame. The two piers and the arch above had now been thoroughly consolidated and made practically monolithic without the removal of any large proportion of the ancient facing stones. It must not be supposed that the whole of this delicate piece of work was performed without any extraordinary precautions being taken. All old fractures were bridged with cement tell-tales, and the inspection and renewal of these, and the examination of surrounding surfaces for possible new cracks, formed an important part of the work. The labour of keeping the temporary supports, wedges, screw jacks, props, and bars in an efficient state of bearing during two years was colossal, and demanded vigilance both day and night. Undue force in tightening minor supports would have precipitated movements in the shattered structure, and to keep all supports equally tight demanded a routine of rounds which could neither be neglected nor relegated to any inexperienced workman.

The information as to movements in the structure afforded by the cement tell-tales and the opening of fractures was augmented by periodical readings of the levels of a series of copper dowels that had been inserted in the tower parapet at the commencement of the repairs, and also by reference to plummets at the corners of the tower. As the readings from these sources admitted of some uncertainty due to varying conditions of temperature, humidity and wind pressure, a special instrument for detecting minute movements was prepared at the National Physical Laboratory, Teddington. After experimenting with a magnifying lever arm, a telescopic apparatus was installed. The telescope was mounted upon a rigid support and was directed to sight through a lens fixed upon the north-west pier near its base to a graduated scale on the north transept wall. Readings of great precision were taken with this instrument, which permitted records to be kept of movements incapable of measurement by levelling or the use of the plummet.

A clerk of the works' report on July 21, 1917, describes the tell-tales and plummet wires as steady and no sign of movement in the tower. The telescope readings, however, lifted slightly on very hot days and returned to the centre of the scale on cool ones. The variations due to temperature were extremely slight, and from the moment the recoring was completed structural movement was practically brought to a stop with the summit of the tower just 1-16th in. lower than it had been shown by the preliminary survey.

The future preservation of the tower demanded that the underpinning should be put in hand. The weight of the two defective piers and of the north wall of the tower had been increased, by the addition of sound new material, to the extent of approximately 32 tons, and against the improved power of resistance thus obtained the fact had to be considered that some of the chief original causes of decay remained unchecked. Nothing had yet been done to spread the weight effectively upon the weak subsoil. The south winds would still tend to overturn the building, and the existing historical overhang of the wall to the north, which had been pre-



THE UNSIGHTLY PATCHES OF CEMENT RENDERING IN THE CLERESTORY HAVE BEEN REMOVED AND REPLACED BY ROUGH SURFACED POINTING TO HARMONISE WITH THE TEXTURE OF THE SURROUNDING WORK.

served with all other historical evidences, still exerted a damaging eccentric pressure upon the two northern piers, and would assuredly tend to make them grind their way deeper into the subsoil by imperceptible degrees with every vibration of the building just as had been the case before the repairs had been undertaken.

The underpinning operations were complicated by the presence of the temporary foundations for the pitch pine dead shores, which could not be removed until a large proportion of the underpinning was completed. These concrete blocks beneath the shores had been inserted when the shattered condition of the piers forbade any freedom of excavation near their bases, and for this reason it had been found impossible to arrange for their retention or include them as part of a future scheme of underpinning. To keep the pressure on the subsoil below three tons to the square foot a large lateral spread was necessary, and the combination of mass concrete with a grillage of reinforcement was adopted. The principle of executing the work in sections, which had been pursued successfully in the recoring of the piers was also adopted for the insertion of the new foundations. As each pit was formed for depositing the concrete the reinforcing rails were laid with their ends pushed forward into small holes groped for them in the earth on the sides where other sections of concrete would be cast in later stages of the work. Bond between the different blocks was assured by several lengths of rail inserted in this manner, and also by steps or toothings formed in the concrete to avoid straight vertical joints between one block and the next. Six-inch toothings were formed by the use of double waling pieces to strut the sides of the excavations and then depositing the concrete around them. The waling pieces were removed when the next adjoining section of excavating was put in hand. The interaction of design and the proposed method of execution, so essential in the treatment of ancient monuments, is clearly illustrated in these simple and sensible provisions.

As the underpinning neared its completion and the space occupied by the foundations of the dead shores was required for this purpose, means had to be taken to relieve and withdraw the steel needles. These had been forced to take a very great portion of the weight of the tower and were tightly fixed on the tops of the dead shores, with the steel folding wedges jammed and immovable beneath their seatings. It was desirable that the removal of the needles should be performed without shock of any kind, and also that after they had been relieved they should remain in position ready to be wedged up again in case of necessity if any settlement or fracture appeared in the building owing to the altered conditions of support as its weight was replaced upon the piers instead of upon the needles and dead shores. The operation was performed by sawing the dead shores through near their tops, the saws being followed up by thin-bladed steel wedges specially prepared for the purpose. The wedges were driven in such a manner that when the saws were withdrawn the wedges filled the saw-kerf and supported the weight. The wedges were now gradually withdrawn again by means of a specially designed screw press, and the needles were lowered about 1-16th of an inch. The weight of the tower was now once more borne upon its Norman piers. Although the overhanging walls of the nave did not present the same difficulties as the tower or call for such radical treatment, their state was far from satisfactory since, while the bases of their piers stood in approximately straight lines, the wall tops as seen from the top of the tower were curved into gigantic bows with fractures at the centres of the curve, where their overhang reached its maximum, and at the points of junction with the masonry of the west gable and of the central tower. The difficulty of successfully treating these walls was very greatly increased by the piecemeal decay of the stone surface under the action of wind and damp, particularly in the soffit and walls of the clerestory passage. Certain repairs had already been executed here in recent years which were sound enough to be permitted to remain though the hard sharp edges and monotonous tooling of the new stonework contrast painfully with the weather-worn appearance of adjoining parts. Fortunately the walls are neither very high nor very heavy, and the piers, though slender, are comparatively well built and closely spaced. The pressures due to the overhanging wall tops are therefore not altogether out of proportion to the resistance afforded by the piers below. The walls were consolidated by washing out the dirt from cavities and defective joints and inserting cement, tamping and pointing. The overhang of the wall and the exclusion of water from the wall top were treated together. The loose dirty core in the wall top was removed and replaced by a long reinforced concrete beam hidden in the thickness of each wall. These beams are not designed to carry weight above their upper faces, but to act horizontally against the wind pressure from the south and against the overturning moment of the wall itself towards the north under the action of its own unbalanced overhang. Ample masses already existed in the masonry of the tower and of the west gable to form anchor holds or abutments at the ends of the long beams and the outward leaning west gable will be benefited by having the ends of the beams buried into its substance to prevent its further drift towards the west. Above the beam the wall top was neatly paved with York stone slabs with a sunk stone gutter and stone gargoyles to throw the water clear of the lower parts of the walls.

The Lady Chapel, which occupies the south choir aisle, retains its early vaulting, rising from massive cylindrical piers. The upper surface of the vault had already been protected by an asphalted flat roof at some former repair, and this has been allowed to remain in position, although when seen from above its dingy black colour is not altogether in harmony with the warm buff and purple grey of the old stonework. The underside of the vault had become covered with a sooty incrustation which adhered to the many coats of lime-white superimposed upon the surfaces of the ribs and panels. After ascertaining by experiment that no colour decoration remained to be affected, the dingy coat was carefully removed and the stone surface brought to light once more.

A paving of York stone was laid as a floor to this chapel to prevent the driving rain making a quagmire of the subsoil.

Excavations on the south side of the building revealed some foundation walls of claustral buildings which have been preserved in view; but the major part of the Abbey ground has been laid out as a garden, which makes a peaceful and pleasant setting to the ancient walls. The artistic value of such suitable surroundings is immense, particularly when blue, cream and white flowers happen to be showing in profusion.

Victoria and Albert Museum.

The Swiss Minister, Monsieur C. R. Paravicini, has lent to the Victoria and Albert Museum seven panels of early stained glass which are now exhibited on the stairway leading from Room 131 to Room 112 on the first floor. Three of the panels, originally in the Cathedral, Passau, belong to the Salzburg School and are dated 1494. The remainder are rare early Swiss work—two representing the Virgin and St. John the Evangelist, of either the Constance or the Zurich School of about 1430; and two are heraldic panels of the School of either Constance or St. Gall, dating from about 1440.

PRESERVATION OF ANCIENT MONUMENTS & HISTORIC BUILDINGS.

SIR FRANK BAINES, C.V.O., lectured before the Royal Society of Arts on December 12 on this subject. Sir Aston Webb, K.C.V.O., C.B., P.R.A., presided.

The lecturer said he did not think it was necessary, in view of his audience, to state a case which illustrated the value of preserving their ancient monuments and historic buildings. They were a part of the culture and history of the British people, and he proposed to take it for granted that they were in agreement as to the essential need of their retention and preservation. They were a signal record of a previous social tradition which brought down to our mechanical and competitive age a suggestion of a saner spirit and finer method of life.

Before discussing the question in detail, he would like to suggest first of all what they meant when they used the word "preservation." Clearly they did not mean restoration, or replacement of what was gone; they did not mean renovation or renewal. The latter phrases were dangerous phrases—they were sometimes used by people entirely conservative in their sympathies, as though they were interchangeable with the term "preservation." Of course they were not interchangeable, and it was necessary to define the word "preservation" as it meant a method which involved the retention of the building or monument in a sound static condition, without any material addition thereto or subtraction therefrom, so that it could be handed down to futurity with all the evidences of its character and age unimpaired. Restoration might be a word which justifiably described a method of preservation, but he wished to make it clear that that method was not the method he advocated.

The treatment of ancient monuments in the past might be referred to under three headings—the first, regrettably represented by the word demolition; the second, by the word restoration; and the third, by the word preservation.

The first phase clearly could be said to date from the dawn of history, and had been arrested in part only so late as the early years of the nineteenth century.

Even when archæology was studied scientifically, Lord Elgin would seem to have had no compunction in removing the treasures of Greece to this country, while as late as 1877 Cleopatra's Needle was brought to this country and set up by the Thames. Naturally it decayed under the acid-laden atmosphere of modern London.

In Germany, however, regulations for the preservation of its ancient monuments had been framed since 1815, and although they would not appear to have had statutory sanction, much respect was shown for their monuments. Indeed, Germany was richer at the present time in mediæval church furniture than any other country of Europe. England, in accordance with the democratic social organisation, appeared to await the expression of public opinion before committing itself to statutory enactments, and it was not until 1822 that the first Bill which dealt with the subject became law.

In England, as in France, the lecturer said, the damage done owing to over-prodigality of expenditure in preservation had been serious and irreparable. For example, to give one instance alone, the restoration of Worcester Cathedral between 1857 to 1874, which involved an expenditure of considerably over £100,000, resulted in handing down to us a building that was externally to all intents and purposes a modern structure. There was no record that major structural problems were involved, but a great deal of money was

spent on refacing, owing to the character of the red sandstone of which the Cathedral was built. During the first 50 years of Queen Victoria's reign, well over £1,000,000 was spent on 20 of our cathedrals, with results that the judicious could only deplore; many of these buildings were now largely modern, particularly so in the cases of Worcester, Chester and Lichfield. The east window of Carlisle and the west window of York Minster, probably the finest examples of flowing tracery in this country, and perhaps in the world, were lost to us; the whole having been renewed in both cases. Need he say again that replicas of ancient work, however perfectly and accurately executed, could have no real historic or archæological value whatever.

The lecturer said the first principle laid down in regard to the problem of preservation was the need to ascertain as clearly as possible the static condition of the structure under all its conditions of decay, incipient and partial failure, actual collapse, etc., and he first of all dealt with Tintern Abbey, which he said was one of their most interesting and romantic Cistercian abbeys. The date of the existing work was generally that of the end of the thirteenth century.

The original proposal, before the Department undertook the charge of the building, was to take down and rebuild plumb, a great proportion of the arcade above the arches. The Department, however, decided that such a course of action would ruin the amenities of the building and, generally, the scheme which was undertaken was to relieve the eccentric stress on the north side of the piers, and also to relieve them entirely of stress due to wind pressure. This was done by the institution of a great lattice girder of the N. type anchored into the wall of the south transept and to the wall of the west gable, designed to move under temperature stresses and under slight oscillation of the arcade. He wished to make it clear that the scheme was devised to preserve the amenities of the arcade as seen from the nave, which otherwise would have had to be heavily buttressed.

The lecturer then referred to Rievaulx Abbey, which he said was the earliest Cistercian House in the country, being founded in 1131. Of the church, only the presbytery and the choir with the transepts and the east arch of the crossing remained; and the nave, when it was taken over by the Crown, presented a dimpled mound of ruins. The ruins had been used as a quarry by the neighbourhood for many years, and certain difficult structural problems were involved in their preservation. The method adopted to preserve the stability of the arcade and the chancel was to remove the fractured stones one by one and to recore the whole of the spandrel and pier above with strong reinforced concrete. Afterwards the stones removed for the purpose of executing the work were replaced in their exact positions. No single new facing stone had been used, and even in the 12 months which had elapsed since the completion of the work no trace of what had been undertaken was observable.

The lecturer said that the problem of Jedburgh (recently dealt with in *The Builder*) was one of the greatest with which the Department had had to deal.

It was believed that before the building was handed over to the control of the Government, a suggestion had been made to take down the tower and rebuild it, at a very heavy cost. The methods followed by the Department, however, could not contemplate this.

The actual cost of the work undertaken at Jedburgh by their methods, which were slow but inexpensive, was probably one-tenth (for the whole church) of what it would have cost to take down and rebuild the tower alone. To-day the tower stood absolutely as it was with no additions thereto, beyond the internal reinforced core, which was now carrying the load, with all the modern additions removed and the amenities of this fine building were entirely preserved.

The lecturer said that Carnarvon Castle was probably the finest defensive castle in the country, and, indeed, in Europe: one of the great Edwardian defensive castles dating from 1285-1322. As the works of preservation, however, were mainly of normal character, he did not describe it in detail.

In regard to the method of preserving Whitby Abbey, the difference made in the building since it was taken over by the Government was very great, as it was suffering from destruction as a result of bombardment during the war, while the nave and the crossing were littered with fragments of the fallen church. The history of the Abbey was of extraordinary interest, as it was first founded upon the present site in A.D. 657, but the portion which remained was the twelfth-century church, which consisted of nave and choir, with aisles, transepts and, originally, a lofty tower at the intersection, all of which were encumbered with great masses of fallen masonry from the vaulting and superstructure which fell in the nave in 1762 and the great central tower which fell in 1830. Their recent excavations had revealed a large section of the plan of the Norman church, which would be shown in outline on the floor of the present church. The excavations to the north of the church now disclosed some very early buildings, which appeared to have been constructed in part of "wattle and daub." The excavations were far from complete at the moment, but it would appear that eventually a large portion of the Saxon, Norman, and twelfth-century buildings could be disclosed, the two former at least in plan. The problem in dealing with the west front was very difficult, as many of the stones were shattered into fragments, and the greatest difficulty was found in identifying them and replacing them in their true position. No moulded and wrot stones were put back unless they were original, and the whole of the work, after the work of preservation had been completed, was such that no intelligent observer could do other than perceive accurately what was original work and what was the later work of strengthening and repair.

In Kirby Muxloe they saw an example of a fortified manor house of Tudor times, which was commenced in 1480, apparently upon the site of an earlier moated house. It was of brick construction throughout, even to the turret staircases, with their complicated and enriched winding vaults, and was a remarkably fine example of first-rate brickwork of the period. The problem of preserving a brick building was entirely different from that of a stone building, particularly where the bricks were scaling and flaking through weather and age, and through the action of growth of all kinds. No attempt had been made, however, to re-face the scarred brickwork, but the flaking and decaying brickwork had been seized by a mastic cement and the original faces retained without any addition.

The lecturer next dealt with Bylands Abbey, which, he said, was in a serious state of neglect when it was handed over to the control of the Government. It was situated on the rich fertile plain at the foot of Combe Hill, in the North Riding, and there was little remaining above the ground level beyond stumps of walls heavily covered with ivy, all of which were in a state of complete disintegration and decay. There, again, the building appeared to have been used as a quarry for those requiring materials for building in the district. Buttresses were robbed, and the ashlar masonry removed in many instances as far as could be reached without scaffolding. It was difficult to exaggerate the appalling condition in which this building was found, and the regret they must feel was emphasised by the wonderful finds of enriched and carved work which they had made in excavating the church. The magnificent detail of much of the work of the building could hardly have been apprehended before its preservation was undertaken. Moulded caps and bases, corbels and carved springers, etc., had been found which, for their simplicity and beauty of design and astonishing assurance of execution, were difficult to rival. Quite a large area of fine vitrified tile paving had been exposed in the chancel which, although somewhat rough in manufacture, had special merit for its design and planning of colour scheme.

The next building, which illustrated the methods followed by the Government, was Goodrich Castle, the earlier history of which was not known. It was mentioned in 1204, while the small and very perfect Saxon keep clearly suggested that the work of the castle originated before the Norman Conquest, while the present remains, apart from the keep, would appear to date from Norman times until the reigns of Henry V and Henry VI. The problem was, he said, again grave, because of the consistent neglect of the building for well over 200 years. The stone used in the castle was a soft red sandstone, without any great strength, and this had weathered very badly, and the greatest care had to be exercised in dealing with the stonework, which was fractured and split apart in many cases by the roots of ivy and young trees growing upon the wall heads. Only a few weeks before the building was transferred under the Ancient Monuments Act a length of the north-west curtain wall, totalling a weight of 200 to 300 tons, fell into the moat, and left little or no evidence of the main cause of failure, but illustrated very definitely that the masonry had little strength in resistance to shear. They found that this castle was "slighted" by an order made by Parliament in 1647, and it was probably due to this order that the castle was in such an appallingly defective condition, although it was surprising that so much remained standing nearly 300 years after the order was made.

The lecture was illustrated by slides and views of the following buildings and structures:—Netley Abbey, Hampton Court Palace, Westminster Hall, Richmond Castle, Huntingtower, Stonehenge, Maes Howe, Mousa Brock, Maiden Castle, Dorchester; and the lecturer explained briefly the character of the works of preservation undertaken in each instance, and illustrated how the scheme of preservation was strictly relative in every instance to the peculiar character of the work which remained.

Law of Property Act, 1922.

Mr. A. F. Topham, K.C., gave his third and last lecture on this subject at the College of Estate Management on December 1. In this lecture Mr. Topham dealt with the changes in intestate succession under the new Act, and showed the various ways in which the law of succession had been simplified. He pointed out that these entailed no real hardship on anybody because if the rules of intestate succession were not liked it was only necessary for the person to make a will in order to avoid them. The new Act also simplified matters very much by doing away with the various rules which in the past had been connected with the various kinds of tenure. The lecturer then dealt with the subject of compulsory registration of title and the arrangements for its possible extension to the Provinces in years to come. He also pointed out the improvements which were made in the Act of 1922 in the working of the Register. The various extensions and amendment of the Settled Land Act under the new Act were then considered and explained. In conclusion he pointed out that he had had to omit very many important points in the new Act, but the features he had dealt with were the outstanding ones which were of the greatest importance to those dealing with estate and to those who make the greatest change to the general public.

THE POETRY OF ARCHITECTURE.*

THE claims of architecture are so important in the attainment of the higher standards of living now considered necessary for the people, that we welcome the growing interest which is evident around us. A wide field of operation is opened to all who are engaged in the building crafts, but without general esteem and popular appreciation to replace the patronage of the past there can be no stable foundation upon which to develop the art. It is with pleasure, therefore, that we observe the inclusion in the People's Library of a volume upon the "Poetry of Architecture," by Mr. Frank Rutter.*

Both in the title of his book and by the significant headings of the chapters, our thoughts are directed to architecture in its more emotional sense. The author writes of the ages—of Fear, of Grace, of Strength, of Piety, of Aspiration, of Elegance, and, last of all, of Memory. He is not unconscious of the fact that these fluctuating and variable emotions existed at every age—we might add that most of them occur not only in humanity but in the animal kingdom. The author believes in the predominance of one or other of these emotions as distinguishing traits upon the physiognomy of buildings, and as visibly impressed upon the canonic styles. Architects are too deeply preoccupied with the systems of construction and the synthetic development of design to set much value upon these psychological impressions, but the unfailing attraction they possess for others must be recognised.

From the professional point of view the book may be regarded as the work of an amateur of taste and intelligence, whose intuitions, predilections or prejudices, are not always sound; but it is clear that he enjoys architecture and appreciates it in many of its manifestations. Some parts of this book bristle with what we regard as erroneous views founded on misinformation and misunderstanding, but this will not disturb many who would hesitate to approach our professional literature. The art of simple and natural description, which seems to come so happily to his pen, does not generally come so easily to those engaged in finding expression in another medium.

Architecture is one of the most wonderful of human achievements. In every style and at every age its transcendental qualities are visible, and although æsthetic expression may at times seem feeble and inadequate, when we have probed a little deeper we generally see, preserved those fundamental and universal principles which underly all the arts. Architecture proceeds upon rational and continuous principles, however miraculous and wonderful the structure may appear: it is the outcome of particular circumstances resulting from methods responding to the knowledge of the times. Such fearful solemnity as impressed Egyptian architecture accrues from the heavy terraced roofs employed in that early stage of civilisation, and from the heavy columns which were required to support such a load. The grace of Greek and Greco-Roman buildings was made possible by the introduction, at a later date, of the tiled or gabled roof. The strength and grandeur of the architecture of Imperial Rome, with the magnificently ordered plans, marks the development of the Arch and its congener the Vault. The daring developments in arcuated building ultimately attained in the aspiring churches of the Middle Ages follow a gradual constructive development. Such amazing structures only the gods could have foreseen, with imaginations in full flight.

A further accumulation of knowledge, with new-found individual liberty, accompanied by profound study of the monuments of antiquity, inspired the Renaissance. The scholarly impressiveness of St. Paul's Cathedral, the North Pavilion of the Louvre, the Theatre of S. Carlo, Naples, and such spirited and imaginative frontispieces as that of the Cathedral at Granada are the culmination of all that had then been attained in architecture.

The memory of these undying glories fills our minds with ardour, and what has been done encourages us to continue in the same spirit the same undying traditions to the attainment of a still greater future.

* "The Poetry of Architecture." By Frank Rutter. (London: Hodder & Stoughton.) Price 2s. 6d. net.

PRESENTATION TO AN ARCHITECT.

ON December 12, at the Savoy Hotel, a complimentary dinner was given to Mr. F. C. Bayliss, F.S.A., followed by a presentation of silver plate. The chair was taken by Mr. C. T. Marshall, L.R.I.B.A. The following guests were present:—Mr. F. C. Bayliss, F.S.A.; Sir Charles T. Ruthen, F.R.I.B.A.; Mr. W. H. D. Acland; Mr. M. St. J. Hornby; Mr. W. Tweedy, F.S.A.; Mr. F. Bayliss, jun.; Mr. G. S. Packer, M.S.A.; Mr. G. Pemberton, L.R.I.B.A.; Mr. P. B. Rigg, M.S.A.; Mr. B. C. Andrews, M.S.A.; Mr. G. L. W. Blount, M.R.I.A.I.; Mr. A. H. Lister, M.S.A.; Mr. H. T. Bill, A.R.I.B.A.; Mr. L. F. Thurgood, C.S., and Mr. G. Overall.

SIR CHARLES RUTHEN proposed the guests, and MAJOR ACLAND responded.

MR. G. S. PACKER said he regretted the President and Secretary of the R.I.B.A. and the S.O.A., respectively, were unable to be present. He mentioned he first met Mr. Bayliss when he was the architect for a warehouse in connection with a large shop in the North.

MR. C. T. MARSHALL said it had seldom been the lot of any man in the architectural profession to preside over a similar function to that which he had the pleasure of presiding over that night.

Mr. F. C. BAYLISS, in reply, said it was very interesting, when one looked back, to see the close association between the smiths and the architects in monasteries of long ago. To their encouragement of the arts they owed much of their present prosperity. Ruskin said there were four standards of architectural admiration: sentiment, pride of possession, workmanship, and the artistic. The question whether the thing admired was wholly admirable depended entirely on a matter of proportion—did it serve its proper purpose? That was the standard they had to judge by to-day.

One of Edgar's laws read: "We command every priest to increase knowledge, diligently learn some handicraft." That law had far-reaching effect on their development, although it was made by a comparatively young man about the year 975; and they all realised to-day that the fostering of the arts and crafts was a vital thing in the country's welfare.

Ruskin further said of the architect that he was one who could appreciate all the beautiful things of the world, and brought them into proper use, rather than a mere builder of stone and iron. As architects they had a very high mission if they liked to grasp the opportunities before them. If they looked round they could see that a new order of architecture was springing up, which might appropriately be called "the commercial order." It was having a great influence on the style of architecture in all their great cities and towns. It was rather interesting to note how their first shops came into being in England. It seemed a remote illustration, but was, notwithstanding, a true one, however quaint. The feast days of the priests became the fair days; they gradually led to the "forestaller," whom Henry III regarded as an oppressor, and an edict was brought out against him and his little stall in the road, which eventually led to the front room of the houses being turned into shops for the display of goods.

If they carried their minds back 20 years they could easily visualise the wonderful progress which had been made in the streets of their principal cities. One had only to think of Regent-street and the colossal changes which were taking place, of the great difference between the ideas which were forcing their way into prominence in the development of those buildings, and what was attempted in the first block near Piccadilly-circus, to realise the truth of the assertion that there was a shop architecture springing up which took into account the vital needs of the business which they had to house. Kingsway was another example. He remembered being one of the first to go down Kingsway when it opened and when one looked at it to-day it seemed very difficult to imagine the quietness of its earlier days. Many more examples could be given, but those given served to show the great future which laid before them in this respect and the need for a department of architecture which took into account the business requirements of their streets.

MUNICIPAL RECREATION.

THE eighth of the series of lectures on Town Planning, given by Mr. William Haywood, F.R.I.B.A., at Birmingham University, was entitled "Municipal Recreation," in the course of which the lecturer said that an important auxiliary to health in great cities was the provision of an adequate amount of open space; and where this could be arranged in association with closely built areas, it was at its greatest value, whether for the general purpose of ventilation or as an aid to amenity.

The absence of spacious accommodation for promenading in industrial towns led to the use of main roads for this purpose—a purpose which they were never intended to serve; and which cities like Vienna, with great belts of parkway near to the centre of the town, could absorb with advantage to all concerned.

Suburban parks, which were once used almost exclusively for promenading, were now greatly encroached upon in order to accommodate casual or organised ball games, the increasing demand for which continued to embarrass the park administration of our great towns. This was particularly true of Birmingham, where, notwithstanding the provision of special sports-fields by large industrialists for the use of their employees, and the generous efforts of the municipal authority and of private benefactors to extend the present accommodation, the need was still very great.

It was clear that park administration in this country was tending towards wider and more significant responsibilities; and that in common with other European countries we should reconsider the whole question of municipal recreation on a basis similar to that adopted in America, where great nature reservations outside the city were linked up with suburban parks, by means of parkways and strays, which cut right across the heart of the town, and so brought space and amenity to those who needed it most. This framework was supplemented by neighbourhood centres, which were provided at suitable intervals, for those whose duties or temperament kept them near to their homes, and by smaller grounds where children could play in safety with apparatus specially designed for their use.

Such schemes for recreative facilities were designed as an integral part of the town plan, and were adjusted to the needs of all classes of the population. Their cost was usually met by a "betterment levy," *i.e.*, a method of assessment on property which had been improved in value by association with new parks and boulevards.

Messrs. G. Bell & Sons, Ltd., inform us that early in the New Year they are publishing an illustrated volume on the ancient architecture of Western Asia. It will deal with Chaldæan, Hittite, Assyrian, and Persian architecture.

THE BUILDING TRADE.

ESTIMATING FOR SMALL BUILDERS.—X.

By J. H. BARNS, F.I.O.B.

PIPE WORK.

THE following is from the Standard List of Prices for wrought welded tubes and fittings :—

Nominal internal diameter, in inches.	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Tubes 2 ft. long and over ..... per ft.	4d.	4½d.	5½d.	6½d.	9½d.	1/1	1/4½	1/10
Pieces 12 to 23½ in. long ..... each	10d.	11d.	1/1	1/5	1/11	2/8	3/4	4/9
Do., 4 to 11½ in. long..... „	7d.	8d.	9d.	11d.	1/3	1/8	2/2	3/–
Long screws, 12 to 23½ in. long.. „	11d.	1/–	1/3	1/7	2/2	2/10	3/9	5/3
Do., 3 to 11½ in. long..... „	8d.	9d.	10d.	1/1	1/5	1/11	2/6	3/6
Bends ..... „	8d.	9d.	11d.	1/2	1/7½	2/7½	3/2	5/2
Springs, not socketed ..... „	5d.	6d.	7d.	9d.	1/1½	1/11½	2/3½	3/11
Elbows, square ..... „	10d.	11d.	1/1	1/3	1/6	2/2	2/7	4/3
Tees ..... „	1/–	1/1	1/3	1/7	1/10	2/6	3/1	5/1
Backnuts ..... „	2d.	2d.	3d.	3½d.	5d.	6d.	8d.	1/1

Random lengths of wrought iron tubes over 12 ft. screwed and socketed are charged at list prices. In the case of tubes being supplied otherwise than in long random lengths the increase would be as follows :—

Random lengths over 12 ft. screwed at ends, but without being fitted with sockets, less 2½ per cent. on the nett.

Random lengths over 6 ft. and up to 12 ft. inclusive, screwed and socketed, plus 5 per cent. on the nett.

Random or exact lengths 2 ft. to 6 ft. inclusive screwed and socketed, plus 12½ per cent. on the nett.

Tubes are cut to exact lengths if so desired, and charged at 2½ per cent. less gross discount.

DISCOUNTS.

Black gas tube and fittings	52½	per cent.	discount
Blue water do.	47½	„	„
Red steam do.	42	„	„
Galvanised gas tubes ..	37½	„	„
Do. do. fittings ..	42½	„	„
Do. water tubes	31½	„	„
Do. do. fittings ..	37½	„	„
Do. steam tubes ..	25	„	„
Do. do. fittings ..	32½	„	„

It will be seen from this list that wrought iron tubes, 2 ft. long and over, are charged at the Standard List price, less the discounts, which vary from time to time.

Pieces less than 2 ft. are sold at each.

Long screws are pieces of wrought iron tube with a longer thread than usual, and are used to form a connector. The connector, therefore, consists of a long screw and a backnut ; the backnut is necessary, otherwise the joint is apt to leak owing to the thread of the long screwed tube being cut slightly deeper.

Bends are supplied to several angles. When supplied to a right angle they are termed "Bends" ; when to some more obtuse angle they are termed "Springs." The seeming difference in price is due to the springs not being quoted with sockets.

Nowadays a large amount of pipe work is done by entirely eliminating the screwed ends and sockets to the barrel, and doing the whole work with plain barrel and making bends and connections of the pipe by acetylene welding methods, and it is considered in the case of pipes 2 in. diameter and upwards to be much cheaper.

One of the advantages claimed for this method is that in the event of a pipe leaking it would only be necessary to use an acetylene blow pipe to remedy the defect.

In estimating for tube work it is necessary to measure the actual running length of the pipes, and the number of the fittings such as tees, elbows, bends, &c., required.

ELBOWS (SQUARE).

Internal diameter.	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
List price	10d.	11d.	1/1	1/3	1/6	2/2	2/7	4/3
Discount, 42½ per cent.	4d.	4½d.	5½d.	6½d.	8d.	10½d.	1/1½	1/9
Nett	1/2	1/3½	1/6½	1/9½	2/2	3/0½	3/8½	6/–
Labour fixing would cost about 25 per cent. of gross cost of fitting, say....	2½d.	2½d.	3½d.	4d.	4½d.	6½d.	8d.	1/1
	1/4½	1/6	1/10	2/1½	2/6½	3/7	4/4½	7/1

BENDS.

Gross List price	8d.	9d.	11d.	1/2	1/7½	2/7½	3/2	5/2
Discount, 42 per cent.....	3½d.	4d.	5d.	6d.	8d.	1/1½	1/4	2/2½
Nett price	11½d.	1/1	1/4	1/8	2/3½	3/9	4/6	7/4½
Labour fixing would cost about 25 per cent. of the gross cost of fitting, say..	2d.	2½d.	3d.	3½d.	5d.	8d.	9½d.	1/3½
	1/1½	1/3½	1/7	1/11½	2/8½	4/5	5/3½	8/8

TEES.

Gross List price	1/–	1/1	1/3	1/7	1/10	2/6	3/1	5/1
Discount, 42 per cent.....	5d.	5½d.	6½d.	8d.	10d.	1/1	1/4½	2/2½
Nett price	1/5	1/6½	1/9½	2/3	2/8	3/7	4/5½	7/3½
Labour fixing would cost about 50 per cent. on the gross cost of fitting, say..	6d.	6½d.	7½d.	9½d.	11d.	1/3	1/6½	2/6½
	1/11	2/1	2/5	3/0½	3/7	4/10	6/–	9/10

The cost of labour, &c., for running tube work is approximately as follows :—

Per ft. run, ¼ in., 2d. ; ⅜ in., 2d. ; ½ in., 2½d. ; ¾ in., 3½d. ; 1 in., 4½d. ; 1¼ in., 6½d. ; 1½ in., 8½d. ; 2 in., 11d.—or about 50 per cent. of the gross cost of tubes.

The cost of fixing the fittings, elbows, &c., would be additional.

As a rule it is rather cheaper to form a "fire" bend than to use the ready-made article, as with ready-made bends it is necessary to make two joints, which give more opportunities for leakage.

In the bending of iron pipes care must be taken not to buckle the pipe, and to ensure this for the larger size pipes two or more heats in forge will be necessary. The smaller pipes may probably be bent in one heating operation.

There are various methods of making approximate estimates for pipe work. These are sometimes of use where the runs of pipe are not actually known, and it would, therefore, be impossible to take exact particulars.

A fairly reliable method is to take the approximate number of running feet of pipe and add on about 45 per cent. to the nett cost of the pipe to cover fittings. A special amount must be added for labour to suit the presumed conditions.

Another method of arriving at an approximate price is to find the approximate number of running feet of barrel, add on the probable cost of labour for running the pipe, and add 20 per cent. to the cost of both labour and materials to cover fittings.

Experienced estimators prefer to get the exact particulars required and quote accordingly.

In cheaper work malleable fittings are often used.

MR. FREDERICK JOHN DOVE.

We very much regret to announce the death of Mr. Frederick John Dove, of Messrs. Dove Bros., the well-known London firm of builders, which occurred on December 18. We hope to give a further account of Mr. Dove's career in our next issue.

BUILDING SURVEYORS' AND INSPECTORS' ASSOCIATION.

A GENERAL meeting of the Building Surveyors' and Inspectors' Association was held at Stoke-on-Trent on Saturday last, under the chairmanship of Mr. W. J. Stone (Chairman of the Association). It was resolved that steps be proceeded with for the formation of a London Area Branch of the Association.

At the conclusion of the official business, Mr. James Wilding, F.S.I. (Surveyor and Engineer to the Urban District Council of Runcorn), read a paper on "The Building Surveyor in Relation to Town Planning."

In referring to town planning, he said the knowledge of the suitability of the various parts of a town to carry various buildings was one of the greatest assets of the building surveyor. It was in that direction that the co-operation of building surveyors of large cities was of great advantage in the consideration of the schemes. No matter how desirable dwellings were, public buildings, factories and works would always take a prominent place.

Take the phase of town planning in which housing figured so prominently. Surely that was the domain of the building surveyor. By training, inclination and practice, every detail was familiar to him, and one wondered why men so peculiarly adapted had not played a more conspicuous part. Was it because their work was not looked upon as "creative," but "inspectoral"? If the matured experience obtained from years of contact with cottage

building had been used, would not the results have justified the building surveyor's inclusion in the scheme of things? He commended to them the idea—could not the work be more creative by expanding the scope of duties? Hardly a man in their ranks was without that intimate knowledge of detail which alone secured success, and all must have seen and noticed the impracticability of many well-meaning suggestions. Progress could only be made on a well-laid track; the pitfalls of building were better known to them than to those who spent their days only on design, and it was by knowing the failures that they were able to suggest remedies.

The roads and streets of housing areas were in a different category. Value was secured by keeping the building lines wider apart. The much abused "by-law" street was never the offender, but the commercial spirit which jammed the building line hard on its statutory width. Whether street or building, all came within the purview of the building surveyor.

Nearly every authority had schemes in hand—some completed, some in progress. Each surveyor often had one or more in his district; towns were spreading, slowly now, but with a promise of greater future speed. Why, then, should not building surveyors submit a series of suggestive reports on the possibilities they encountered. They saw the size of rooms; the good qualities or defects of the houses they inspected; they could often vastly improve, had they the opportunity—why not formulate all they could in the way of improvement? He believed there was a great desire in departmental circles to improve conditions and to welcome truly practical schemes.

COST OF BUILDING MATERIALS.

THE Ministry of Health issued, on December 19, the third interim report of the Inter-Departmental Committee appointed to survey the prices of building materials.

It states that since April last, fluctuations in prices of bricks had been comparatively small. In seven instances common bricks were quoted at a higher figure in the returns for October than they were in April, the increase in six cases varying between 2s. 6d. and 3s. 6d. per 1,000. In two instances decreases were shown. The Committee say they have not had brought to their notice any organised effort to raise prices by means of the operation of trade combinations, trusts, or agreements. Owing to the difficulty of obtaining immediate delivery of British-made bricks, in some quarters supplies had been obtained from abroad. The Fletton Association had only reduced their minimum prices, since the appointment of the Committee, by an amount approximating to the reduction in railway rates, and the Committee express the opinion that the Association might well take into consideration the question of a general reduction in their price.

With regard to light castings, the report mentions that there had been a considerable expansion in house building generally, carrying with it as a necessary consequence an increased demand for light castings, such as rain-water goods. There is, the Committee say no longer justification for the maintenance of the existing prices by the National Light Castings Association.

Sir Halford Mackinder, the Chairman of the Committee, in his monthly report, which is appended, states that a further advance in lead has been notified, while timber also, on the average, has increased in price. Common bricks have risen 3s. 6d. per 1,000 at Edinburgh, and, on the other hand, facing bricks in that district had fallen 7s. per 1,000. From Manchester a fall from 65s. to 60s. per ton was reported in British Portland cement. In the remaining materials no very appreciable change had occurred, but in the case of other items, such as nails and turpentine, prices appeared to be somewhat easier.

THE LONDON MASTER BUILDERS' ASSOCIATION

Annual Dinner.

ON Thursday last week, at the Hotel Victoria, Charing Cross, Mr. FRANK J. WALTON (President) occupied the chair at the annual dinner of the London Master Builders' Association, when some 420 members and guests were present. Among those present were Lord Burnham, Mr. E. J. Partridge (President, Society of Architects), Sir Wm. Mackenzie (President, Industrial Court), Mr. W. H. Nicholls (President, National Federation of Building Trades' Employers), Mr. A. J. Forsdike, Mr. T. C. Mansfield (Master, Worshipful Company of Tylers and Bricklayers), Mr. G. Topham Forrest (Architect of the London County Council), Mr. F. J. Gayer (President, Institute of Builders), Mr. C. G. Musgrave (Chairman, Metropolitan Water Board), Mr. G. W. Humphreys (Chief Engineer, London County Council), Mr. J. M. Theobald, F.S.I., Mr. George M. Burt, Mr. E. Wimperis, F.R.I.B.A., Mr. F. Shingleton, Mr. R. Angel, F.R.I.B.A., Mr. A. Roome, Mr. J. P. Williams (President, London Association of Master Decorators), Mr. W. H. Gascoigne (President, Association of Master Plumbers), Mr. F. Higgs, Sir Frederick Rice, Mr. A. G. White (Secretary, National Federation of Building Trades' Employers), Mr. S B. Depree, Mr. B. T. Luckett, Mr. W. B. Simpson, F.R.I.B.A., Mr. L. Shingleton, Mr. H. J. Johnson, F.S.I., Mr. D. G. Somerville, M.P., Mr. W. E. Collier, Mr. R. J. Holliday, Mr. Arnold Mitchell, F.R.I.B.A., Mr. F. M. May, Mr. F. W. Loasby, Mr. J. T. Mackie (President, London Builders' Foremen's Association), Mr. R. L. Roberts, Mr. P. C. Culver, Mr. A. B. H. Colls, Mr. F. Thorne, Mr. E. J. Brown (Director, London Master Builders' Association), Mr. H. T. Holloway, Mr. Roland B. Chessum, Mr. A. B. Falkner, Mr. G. Brittain, Mr. A. H. Adamson, Mr. G. E. Withers, F.R.I.B.A., Mr. W. A. Leaning, F.S.I., Mr. Harold H. D. Anderson, Mr. F. E. Wallis, Mr. H. T. Brammall Daniel, Mr. Ralph Knott, F.R.I.B.A., Mr. Sydney Tatchell, F.R.I.B.A., Mr. Wontner Smith, F.R.I.B.A., Mr. Walter Lawrence, Mr. F. G. Minter, Mr. Josiah Gunton, F.R.I.B.A., Mr. J. E. Drower, F.S.I., Mr. Ben Carter, Professor A. E. Richardson, F.R.I.B.A. Mr. C. L. Gill, F.R.I.B.A., Mr. H. Austen Hall, F.R.I.B.A., Mr. W. G. Newton, A.R.I.B.A., and Mr. W. J. Rudderham (Secretary, London Master Builders' Association).

After the loyal toasts had been honoured, Mr. HENRY T. HOLLOWAY proposed "The Architects and Surveyors." The toast he was proposing was, he said, always most cordially received at the annual dinners of the London Master Builders' Association, and the reason was not far to seek. Both architects and surveyors were held in the highest esteem by builders, and the relations which existed between those professions and the building industry were marked by sincere friendship. The position occupied by architects and surveyors to-day was one of immense importance, not only to the building industry, but also to the people generally. There was no doubt that the appearance of new buildings had an effect on those who lived in the neighbourhood; a beautiful building would have an uplifting effect, while the opposite would be the result from an ugly building. The architect had an extremely important function to perform in beautifying cities, and that this was realised was obvious from the excellent architectural schools in which the younger members of the profession were being educated to high ideals.

In responding on behalf of the architects, Mr. E. J. PARTRIDGE said although generally nothing but goodwill existed between architects and builders, at the same time it had to be acknowledged that in some instances there was perhaps a feeling of suspicion on both sides. It was the endeavour of the architect, as he knew it was of the builder, to overcome that suspicion, but there must be co-operation. The architect could not do without the builder, nor could the builder do without the architect, and without co-operation the various members of the industry would never attain the position they hoped to reach. In urging co-operation amongst the various branches of the industry, he also included the operatives.

Mr. J. M. THEOBALD responded for the surveyors, and said quantity surveyors were very proud of the cordial relations which existed between members of their profession and builders, and very much appreciated the sporting way in which builders accepted the decisions they sometimes had to make.

Mr. ROLAND B. CHESSUM, in proposing "The National Federation and its President," said he would appeal to those present to realise the tremendous responsibilities the Federation had in the welfare of the country generally, and he appealed to all builders to support the Federation. In his opinion the Federation was the only thing which would ameliorate the conditions of strife, and if architects would support the Federation more whole-heartedly by calling for tenders from Federated builders only they would considerably help that body in its efforts to avert strife. At the present time builders outside the Federation got all the benefits that body had obtained for the industry without bearing any of the burdens.

Mr. W. H. NICHOLLS, in responding, said the Federation was the best form of insurance the industry possessed. The past year had been a very worrying time, industrial problems were not getting any easier, and they had found that any measure of success which had been obtained was solely due to the loyalty of the members of the Federation. He thought London had a right to be proud of its new buildings, its architects, surveyors, builders, and operatives, and the aim of the National Federation was to bring about that condition of affairs which would enable the industry to carry on without friction. It was an aim of which they should all be proud. The employer should not only endeavour to get his living out of the industry, but he should do his best to make conditions better for all engaged in the industry, and that was the work of the Federation. They should endeavour to do something for the country as well as get something out of the industry, and there was no better way of combining business and the betterment of the country than by making their industry the channel through which they worked for the improvement of the condition of the country. England was to-day faced with problems such as it had never had to meet before, and that was partly brought about because a large proportion of the community were not able to live up to a good standard of comfort. Members of the building industry should take upon themselves the responsibility of uplifting their industry, for on the shoulders of building trade employers and operatives rested the responsibility of producing such a flow of labour that those conditions could be remedied at the earliest possible moment. But they would not make up for the work which had been kept back by bidding against one another for labour; they would only be able to meet the demand by bringing in an addition to the ranks of the industry.

Lord BURNHAM, in proposing "The Association," said there was never a time when he had so much reason to be proud not only of the standard of integrity, but also of humanity between employers and employed in this country; such relations did not exist in any other country in the world, and he had no fear whatever of the industrial future of this country.

Mr. WALTON, in response, said the Association was greatly indebted to Lord Burnham for the work he did at Tavistock-street. They had passed through a difficult year, but the matters in dispute had been referred to arbitration, and both sides were loyally abiding by the award. They were now looking forward to the sunshine of the New Year. In London the builders had every reason to congratulate themselves on their magnificent solidarity, and the Council had taken steps to organise the membership on a much larger scale; in this work they looked for the personal support of every member.

ELECTRICALLY OPERATED CURTAIN GEAR.

THE Society of Arts' meeting-room in John-street, Adelphi, derives its light in the daytime from a glass dome, the base of which is 12 ft. in diameter and some 40 ft. above the floor level. The room is frequently used for lectures during the day, and to enable slides to be shown it was necessary to devise some means of rapidly darkening the room. At the base of the ventilating cowl at the top of the dome a circular iron ring was already in existence, and to this twelve copper wires were stretched to the base of the dome, these forming the guides for the curtain. The curtain was constructed of black material, made up in the form of an umbrella, in sections to fit the space enclosed by the guide wires. At the points which would be occupied by the ribs of an umbrella a series of rings was sewn on the outside or top of the curtain, and threaded over the guide wires to support it. The edge of the curtain was weighted round the whole of its circumference, so that when the main holding cord was released it would fall by gravity. Attached at equidistant points to the bottom and on the inside of the curtain are six short pulling cords, joined to one main cord passing up through the ring to which the top of the curtain and guide wires are fixed. The operation of opening and closing the curtain is carried out by a small electric winding gear fixed at the base of the cowl. This gear is fitted with limit switches, and is operated by remote press-button control at the back of the room. To darken the room all that is necessary is to press a button, and the curtain descends in about four seconds. This method of darkening the room was worked out jointly by the architect, Mr. A. T. Bolton, F.R.I.B.A., who was responsible for the alterations to the Society's buildings, and Messrs. Edmundsons Electricity Corporation, Ltd., Broad Sanctuary Chambers, Westminster, who carried out the whole of the new lighting scheme and special power requirements necessary for experimental and other work in the Society's lecture-room.

CORROSION OF METALS.

A research on the subject of the Atmospheric Corrosion of Metals is that being carried out by the Atmospheric Corrosion Committee of the British Non-Ferrous Metals Research Association, and Mr. W. H. J. Vernon, B.Sc., the investigator, has just submitted his first experimental report. The work has been carried out under the supervision of Professor H. C. H. Carpenter, F.R.S., at the Royal School of Mines, and deals chiefly with the initial stages of corrosion—the tarnishing of metals. Quantitative measurements have been made on the relative behaviour of different metals and alloys, both indoors and outdoors. The subject is of much importance not only to those who are concerned in the manufacture of metal fittings and articles, but in its direct relation to labour-saving in daily housework.

New Lambeth Bridge.

In connection with the proposed reconstruction of Lambeth Bridge by the London County Council, it is reported by the Improvements Committee that it will be necessary to submit to the Select Committee of Parliament, who will consider the Bill, drawings showing the proposed architectural and artistic treatment of the new structure. Time not permitting of a limited competition among architects, Sir Reginald Blomfield, R.A., has been approached, and has expressed his willingness to collaborate with the Chief Engineer and Architect of the Council in the preparation of the design. It is recommended that his offer be accepted.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the rates of wages in the building trade in England and Wales. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur :—

	Masons.	Bricklayers.	C'p'ters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Accrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Altrincham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ashton-under-Lyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barnsley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barrow-in-Furness	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bath	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bedford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Birmingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bishop Auckland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackburn	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackpool	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bolton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bournemouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bradford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Brentwood	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bridgwater	1/3	1/3	1/3	1/3	1/3	1/3	1/3	0/11½
Brighton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bristol	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Burnley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Burton-on-Trent	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cambridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cardiff	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chatham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cheltenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Chester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chesterfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Colchester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Coventry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Crewe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Darlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Derby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Doncaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dudley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Durham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
E. Glam.(Mon. Vall.)	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Eastbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Exeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Folkestone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½
Gloucester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Grantham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grays	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Grimsby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Great Yarmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Guildford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Halifax	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Harrogate	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hartlepools	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hastings	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½
Hereford	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Huddersfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hull	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ipswich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lancaster	1/6	1/6	1/6	1/6	1/6	1/3	1/6	1/1½
Leamington Spa	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Leeds	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leicester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lincoln	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Liverpool	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Llanelly	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
London	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Loughborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Luton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Maidstone	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Manchester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Mansfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Merthyr Tydfil	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Middlesbrough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newcastle-on-Tyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newport, Mon.	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Northampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Norwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Nottingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oakham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Oldham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oxford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Plymouth	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Pontypridd	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Portsmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Preston	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Reading	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rochdale	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Rochester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Rugby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
St. Albans	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
St. Helens	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Scarborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sheffield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Shrewsbury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southend-on-Sea	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
South Shields	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stockport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stockton-on-Tees	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stoke-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stroud	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3	0/11½
Sunderland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swansea	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swindon	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Taunton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½
Torquay	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Tunbridge Wells	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wakefield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Walsall	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Warrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
West Bromwich	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wigan	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Windsor	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wolverhampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Worcester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
York	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2

(For rates of wages in the Building Trade in Scotland, see page 974.)

COLOUR COMPETITION.

IN connection with their colour scheme for a vestibule, Messrs. T. Parsons & Sons recently arranged for the presentation of the prizes for the best design (illustrated in *The Builder*).

This ceremony was performed by Lady Lavery. As many as 796 colour schemes were sent in from all parts of the country. These were adjudicated upon by Sir Edwin Lutyens, R.A., F.R.I.B.A., Sir John Lavery, R.A., Sir David Murray, R.A., P.R.I., H.R.S.A., Mr. Frank Brangwyn, R.A., and Mr. E. Guy Dawber, F.R.I.B.A.

Mr. Gordon Selfridge opened the meeting and expressed his great pleasure at being present. The object in view was most commendable. He particularly thought that they should encourage the younger members of the community to apply serious and constructive thought to the development of the genius which they possessed. The art of interior and exterior decoration was one to which the latent talent of the country could very well devote itself. They knew that there were numbers of people whose artistic merits should be developed, otherwise they would be left quite dormant.

Sir John Lavery, R.A., who was one of the judges, said that out of the seven or eight hundred colour schemes they looked through very few showed any real sense of repose. He did not mean by this that gaiety and brightness should be subordinated, but he did feel that the reckless use of primary colours irritated rather than soothed the beholder. They were more suited for the Orient, where the sun brought them into line. He remembered Whistler saying that he had brought the sun into London houses by the judicious use of black, white and yellow. Of course, there were other styles of decorations besides those of Japan, by whose decorative art Whistler was much impressed. To-day China and Persia had superseded Japanese influence, but those phases were largely a matter of fashion, though they undoubtedly played their part in the ultimate forming of tastes. In London the desire to see bright colours was a very natural one, but the more sparingly they were used the more telling and direct their effect.

Mr. E. Guy Dawber, F.R.I.B.A., in the course of his remarks said that those who travelled about must have been struck by the feeling of brightness and sense of gaiety of the Continental streets, largely due to the colour used in the painting of the outsides of the houses. Bright cream, yellow, pink, and some white, all added to the cheerfulness of one's daily life and had a noticeable effect on one's spirits.

He contrasted the drabness of our London streets, and urged the introduction of colour on the houses, and even suggested the white-washing, periodically, of such streets as Gower-street, to lighten the gloom with which they were hourly surrounded.

He pointed out the re-action which took place some twenty years ago from the garish wall papers of the Victorian period, to the opposite treatment of keeping every interior a dead white, until now another reaction had set in and colour was demanded on every hand.

They had to be careful, though, not to err too much in the other extreme, and lose their sense of proportion in the endeavour to be original.

Lady Lavery then presented the prizes as follows:—

Mr. E. A. Cox, 120, Adelaide-road, London, N.W.3., 1st Prize 100 guineas; Mr. K. Anns, 5A, Sinclair-gardens, London, W.14, 2nd Prize 50 guineas; Mr. A. W. Wall, 33, Bonnington-crescent, Sherwood, Notts, 3rd Prize 25 guineas.

She was honoured, said her ladyship, by being asked to present the prizes. She only wished there were more. She had seen some of the drawings, and she could not but think there were many of them that she would like to have given prizes to. Her husband suggested a scheme whereby the public could see them and pass an opinion on their merits. She thought that this proposal would be accepted by most people.

Sir Harry Newton then proposed a vote of thanks to Lady Lavery and the distinguished guests present.

THE SCOTTISH BUILDER

DIRECT LABOUR.

DIRECT labour in the building trade was referred to by speakers at the annual dinner of the Edinburgh, Leith and District Building Trades' Association, held recently in Edinburgh.

MR. J. R. WATSON proposed the toast of "The Corporation of Edinburgh," and warned the Corporation against using direct labour. A great deal of harm could be done in a very short time. They could not interfere with the industrial machine with impunity. He would not suggest that the consequences of direct labour would be as bad as in the case of housing, but they would be bad enough.

DEAN OF GUILD FORREST, in reply, said certain parties were doing all they could to get the Corporation to adopt direct labour. So far as he was concerned, he was dead against it.

MR. DAVID A. ANGUS (President of the Scottish Builders' Federation) replied to the toast of "Kindred Associations and Guests," proposed by Councillor J. Hay, and said the day had now come when Scotland and England, in the building trade, could not fight alone. The workmen were united, and what was good enough for the workmen was good enough for them. Their organisation was slowly being built up, and they were all working to one end—the benefit of the trade. After all, it was self-interest that must keep them alive. If they did not work for their own interests, they would be crushed out.

MR. HUGH D. FINDLAY (President, Glasgow Master Wrights' Association) proposed the toast of "The Edinburgh, Leith and District Building Trades' Association," and said the Federation had got clear of wages, hours, and conditions. These matters were now settled by a National Committee. That was a tremendous relief to the local Associations. If all Associations were linked up it would do away with direct labour, because they would be able to assist Corporations in furthering their building schemes. If Corporations were associated with the Building Associations, they would get more work, and would get it done at smaller cost than by direct labour.

THE CHAIRMAN, in reply, said direct labour was now being carried on by certain departments of the city. They had the tramway manager laying down rails. The Water and Gas Committees employed direct labour, not always to the benefit of the city. He thought Councillors should do all they could to sweep away any work done by direct labour and place it out to contract.

NEW BUILDINGS IN SCOTLAND.

Glasgow.—It was announced at the annual general meeting of the contributors to the Victoria Infirmary which was held in the Merchants' House, Glasgow, that the Governors proposed to erect a pavilion for patients and also additional accommodation for nurses, at an estimated cost of £100,000, and that the erection of the Pavilion should be proceeded with early in the New Year.

St. Andrews.—The Town Council has decided, provisionally, to erect 50 houses in the town under the Housing Act, 1923. The architect appointed for the work is Mr. Charles F. Anderson.

Edinburgh.—The Corporation has adopted a scheme for the erection of 20 houses at Saughton-hall-drive. The estimated cost of each house is £560.

Caldercruix.—At a meeting of the Middle Ward District Committee of the Lanarkshire County Council, held recently in the County Buildings, Glasgow, it was stated that in connection with the proposed erection of 50 houses at Caldercruix, the all-in price of a room and kitchen house, according to the lowest tenders received, would be £470. A sub-committee has been appointed to go into the question of costs.

Greenock.—The Dean of Guild Court has passed plans submitted by the Greenock Industrial Society for new house in Prospecthill-street, and for two cottages in Inverkip-road, for Mr. A. Jones.

Edinburgh Factory Fire.

A serious outbreak of fire occurred recently in the Middlemiss Biscuit Factory, Edinburgh, damage estimated at about £30,000 resulting.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Brick layers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Brick Masons' layers'	Plasterers' Labourers.
Aberdeen	1/7	1/8	1/7	1/8	1/7	1/7	1/4½	1/–	
Airdrie	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Alexandria	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2	
Arbroath	1/7	1/6	1/6	1/7	1/6	1/6	1/5	1/1	
Ayr	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Bathgate	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/1 to 1/2	
Blairgowrie	1/7	—	1/7	1/7	1/7	1/7	1/6½	—	
Bo'ness	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2	
Coatbridge	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Dumbarton	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2	
Dumfries	1/5	1/5	1/5	1/6	1/5	1/6	1/5	1/1 to 1/2	
Dundee	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Dunfermline	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Edinburgh	1/7	1/7	1/7	1/8	1/8	1/7	1/6½	1/2½	
Falkirk	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Fort William	1/7	1/6	1/6	1/7	1/6	1/6	1/6½	1/1½	
Galashiels	1/5	1/5	1/5	1/6	1/5	1/5	1/5½	1/1	
Glasgow	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Greenock	1/7	1/7	1/7	1/8	1/7	1/7	1/5½	1/1 to 1/2	
Hamilton	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Hawick	1/5	1/5	1/5	1/6	1/5	1/5	1/5½	1/1½	
Helensburgh	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Inverness	1/3½	—	1/3	1/4	1/4½	1/4	1/3½	10d. to 1/2	
Kilmarnock	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Kirkcaldy	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Kirkwall	1/7	1/5	1/3	1/4	1/4	1/4	1/4	1/–	
Lanark	1/7	1/7	1/7	1/8	1/7	1/7	1/5½	1/2½	
Leith	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Motherwell	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Perth	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Stirling	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Stirlingshire (Eastern District)	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Wishaw	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 973.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

BUILDING AND PAINTING.

DECEMBER 22.—**Bradford.**—PAINTING, &C.—For work at the Cartwright Memorial Hall, viz.:—(1) Internal cleaning, colouring, &c.; (2) French polishing. City Architect, Town Hall, Bradford.

DECEMBER 22.—**Cadoxton.**—RENOVATION.—For the renovation of the shop premises; 100, Main-street, Cadoxton, for the Trustees of the property. Mr. H. Gabe Jones, architect, Bank Chambers, Hengoed.

DECEMBER 22.—**Folkestone.**—COTTAGES.—Erection of 20 cottages adjacent to Penny-Pot Farm, Dymchurch-road, and a further 30 to 40 on Tanner's-hill. Mr. J. L. Seaton Dahl, F.R.I.B.A., Radnor Chambers, Folkestone. Tenders will be based on plans and specification (not quantities). Deposit £2 2s.

DECEMBER 22.—**Moira (County Down).**—COTTAGES.—Erection of 13 cottages in Moira (County Down), for the Government of Northern Ireland. Secretary, Ministry of Finance, 15, Donegall-square West, Belfast. Deposit £1.

DECEMBER 24.—**Aberdeen.**—BRICKLAYER WORK.—For bricklayer work in connection with vertical retort house at Aberdeen Gas Works, for T.C. Mr. S. Milne, Gas Engineer, Aberdeen.

DECEMBER 24.—**Abergavenny.**—HOUSE, &C.—Erection of house, with stables, garage, and two cottages, at Great Trilay Farm. Messrs. Rodger & Stevens, architects, 25, Stoke-lane, Westbury-on-Trym, Bristol.

DECEMBER 24.—**Birkby.**—HOUSES. For erection of a pair of semi-detached houses in Bromley-road. Messrs. J. H. Hall & Son, architects, Exchange Buildings, Market-street, Huddersfield.

DECEMBER 24.—**Brading.**—ROOFING.—For roofing buildings with corrugated iron, &c., at Alverstone Farm, for the Isle of Wight C.C. Messrs. Stratton & Millgate, architects, Newport.

DECEMBER 24.—**Carlisle.**—DEMOLITION.—For pulling down and removing "Bird in Hand" Inn and adjacent premises at Scotland-road, Stanurn, for T.C. Mr. H. C. Marks, City Engineer, 18, Fisher-street, Carlisle.

DECEMBER 24.—**Edinburgh.**—TELEPHONE EXCHANGE.—For erection of telephone exchange at Murrayfield. Architect, H.M. Office of Works, 4-5, Drumsheugh-gardens, Edinburgh. Deposit £1 1s.

DECEMBER 24.—**Rochdale.**—HOUSES.—Erection of 50 houses on the Turf-hill Estate, for the T.C. Mr. S. H. Morgan, Borough Surveyor, Town Hall, Rochdale. Deposit £2 2s.

DECEMBER 26.—**Glasgow.**—PAINTING.—For the painter work of shops at Kennyhill and Riddrie, for the T.C. Mr. J. Lindsay, Town Clerk, City Chambers, Glasgow.

DECEMBER 26.—**Loanhead.**—HOUSES.—Erection of eight houses (three and four apartment), for the T.C. Messrs. Morham & Brotchie, surveyors, 29, Hanover-street, Edinburgh.

DECEMBER 27.—**Battle.**—ALTERATIONS.—For alterations and additions to the Institution of the Board of Guardians. Mr. A. J. Jenner, surveyor, Linton House, Battle.

DECEMBER 27.—**Glasgow.**—HOUSES.—Erection of 276 tenement houses at Crossmyloof, for the T.C. Mr. J. Lindsay, Town Clerk, City Chambers, Glasgow.

DECEMBER 27.—**Liverpool.**—PAINTING.—For external and internal painting, &c., at Kirkdale Homes, Rumney-road Section, for the West Derby B.G. Works Department, Belmont-road Institution, Liverpool.

DECEMBER 27.—**Yealmpton.**—ALTERATIONS.—For alterations at Council School, for Devon C.C. County Architect (Education), 1, Blackall-road, Exeter. Deposit £1 1s.

DECEMBER 28.—**Eastbourne.**—CHIMNEY.—Erection of a brick chimney (60 ft. high) at the Eastbourne Union, 123, Church-street, Eastbourne, for the Guardians. Mr. Fredk. G. Cooke, Assoc.M.Inst.C.E., M.S.A. architect, 2, Hyde Gardens, Eastbourne. Deposit £1 1s.

DECEMBER 28.—**London, N.**—TELEPHONE EXCHANGE.—Erection of a telephone exchange at Palmer's Green, London, N., for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (payable to the Secretary).

DECEMBER 28.—**Manchester.**—SORTING OFFICE AND TELEPHONE EXCHANGE.—Erection of a sorting office and telephone exchange at Openshaw, Manchester, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (payable to the Secretary).

DECEMBER 28.—**Newport (Mon).**—VARIOUS WORKS.—For erecting, for the B.C. Parks Committee, a tennis pavilion, public shelter and public convenience at Crindau Park, Newport. Borough Engineer, Municipal Chambers, Corn-street, Newport. Deposit £1 1s.

DECEMBER 28.—**Southampton.**—HOSTEL, &C.—Contract No. 1: The erection of a hostel for 45 students (deposit £5 5s.); (2) For the construction of ferro-concrete floors, stairs and flat roofs to the hostel, "Coignet" system (deposit £2 2s.), for the County Borough of Southampton. Mr. A. L. Roberts, County Architect, The Castle, Winchester. Cheques to be made payable and crossed "Lloyds Bank, Ltd. (Capital and Counties Branch), Winchester."

DECEMBER 29.—**Bradford.**—HOUSES.—Housing Scheme No. 12, Lower Grange, Thornton-road, erection of 20 houses, Class "A"; two houses, Class "B." (1) Contractors may tender for separate trades, or for the whole of the works in all trades complete; (2) the tenders shall be based upon fixed prices for labour and materials, for the City of Bradford. Office of the City Architect; Town Hall, Bradford.

DECEMBER 29.—**Ennis.**—REBUILDING.—For the partial restoration of Ennis Civic Guard Barrack, co. Clare. Mr. J. J. Healy, Secretary, Office of Public Works, Dublin. Deposit £1.

DECEMBER 29.—**Harrogate.**—SHED.—Erection of store shed, for the T.C. Mr. C. E. Rivers, Borough Surveyor, Harrogate.

DECEMBER 29.—**Salford.**—ADDITIONS.—For additions to Union Infirmary, Pendleton, for the Board of Guardians. Mr. E. H. Inchley, Clerk, Offices, Eccles New-road, Salford. Deposit £2 2s.

DECEMBER 31.—**Liverpool.**—CHAPEL.—Erection of new Chapel, Earlsfield-road. Mr. Owen Owens, 362, Smithdown-road, Liverpool.

DECEMBER 31.—**Monmouthshire.**—BUILDING AND DRAINAGE.—For the following works, for the Monmouthshire Agricultural Committee:—(1) Erection of a set of farm buildings on holding No. 9, at Great House Farm, Caerwent; (2) general repairs and new drainage at Broadwell Farm, Mathern, near Chepstow. Mr. A. Every-Clayton, County Land Agent, 2, Gold Tops, Newport (Mon).

DECEMBER 31.—**Nottingham.**—GARAGE.—For enclosing the stable yard for a garage at Bagthorpe Institution, for the B.G. Messrs. Ernest R. Sutton & Son, architects, Albion Chambers, King-street, Nottingham.

DECEMBER 31.—**Oldbury.**—HOUSES.—Erection of 20 houses in Queen's-road, Londonderry, for U.D.C. Mr. R. Fletcher, Surveyor, Public Buildings, Oldbury. Deposit £2 2s.

DECEMBER 31.—**Owenbeg, co. Sligo.**—EXTENSION.—For extension of Owenbeg National School, co. Sligo, for Commissioners of Public Works. Very Rev. M. J. Canon Tully, P.P., Easkey, co. Sligo.

DECEMBER 31.—**Pontefract.**—HOUSES.—Erection of 24 houses at Willow Park and 10 at Wakefield-road, for the T.C. Mr. J. E. Pickard, Borough Surveyor, Pontefract. Deposit £2 2s.

DECEMBER 31.—**Rhymney.**—CONVERSION.—For carrying out, for the Monmouthshire Education Committee, the alterations necessary to "The Lawns," Rhymney, to convert same into a central school. Hours and wages conditions in contract. Mr. John Bain, Architect, County Hall, Newport (Mon).

JANUARY 1.—**Barnet.**—HOUSES.—Erection of 23 houses at a net inclusive cost of £350 or thereabouts, for the Barnet U.D.C. Contractors can submit their own designs and specifications, or they can quote on the scheme prepared by the Council. Engineer and Surveyor, Council Offices, Wood-street, Barnet.

✱JANUARY 1.—**Ryde, I. of W.**—PAVILION.—Erection of a pavilion in the Esplanade Gardens, Ryde, I. of W., for the B.C. of Ryde. Messrs. Vincent & West, 20, Portland-street, Southampton. Deposit £2 2s.

JANUARY 1.—**Thornton Rust.**—HOUSE.—Erection of a detached house, Thornton Rust, near Aysgarth, for Dr. J. Hutchinson Wood. Mr. P. J. Lucas, architect, 8, King William-street, Strand, W.C.2.

✱JANUARY 1.—**York.**—HOUSES.—Erection of 86 houses of the non-parlour type in blocks as follows:—One block of 2, one block of 5, 16 blocks of 4, and five blocks of 3, at their Heworth Housing Estate, York, for the Housing Committee of the York Corporation. Mr. F. W. Spurr, Architect, Guildhall, York. Deposit £2 2s.

JANUARY 2.—**London E. and Essex.**—STEEL-FRAMED BALCONY AND REPAIRS AND PAINTING.—(1) Erection of steel-framed balcony and verandah at High Wood Hospital for Children, Ongar-road, Brentwood, Essex. (2) Repairs and painting to the Laundry at the Eastern Fever Hospital, The Grove, Homerton, E.9, for the Metropolitan Asylums Board. Office of the Board Victoria Embankment, E.C.4. Deposit £1.

✱JANUARY 2.—**London, S.W.6.**—CLEANING, PAINTING AND REPAIRS.—Cleaning, painting and repairs: (1) Western Ambulance Station, Seagrave-road, Fulham, S.W.6; (2) South-Western Ambulance Station, Landor-road, Fulham, S.W.6; (3) Mead Works, Carnwath-road, Fulham, S.W.6., for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C.4. Deposit £1 in respect of each work.

✱JANUARY 2.—**London, S.W.6.**—LINING BUILDING AND CONCRETING.—Work required to be done in lining an existing steel-framed building to form dust-proof cubicles and an external concrete heating pit, at the Mead Works, Carnwath-road, Fulham, S.W.6, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C.4. Deposit £1.

JANUARY 2.—**Ossett.**—PAINTING.—For painting 13 houses Northfield-avenue, 14 houses Wilson's-avenue, and 22 houses Manor-road and Teal-street, for T.C. Mr. H. Holmes, Borough Surveyor, Town Hall, Ossett.

JANUARY 3.—**Omagh.**—HOUSES.—Erection of 16 pairs of semi-detached dwellings, for the U.D.C. Mr. J. P. McGrath, architect. Londonderry.

✱JANUARY 4.—**Porth, South Wales.**—POST OFFICE.—Erection of a post office at Porth, South Wales, for the Commissioners of H.M. Office of Works. Contracts Branch, H.M. Office of Works, King Charles-street, London, S.W.1. Deposit £1 1s.

JANUARY 4.—**Stafford.**—HOUSES.—For erection of 20 houses in Backwalls North and South, for T.C. Mr. W. Plant, Borough Engineer, Borough Hall, Stafford. Deposit £2 2s.

JANUARY 5.—**Ripley, Derbyshire.**—ALMSHOUSES.—Erection and completion of six almshouses, at Greenwich, Ripley, for the Ripley U.D.C. Mr. G. W. Bird, Town Hall, Ripley, Derbyshire. Deposit 10s.

JANUARY 8.—**Huddersfield.**—EXTENSIONS.—For extensions to Royd's Hall Secondary School, for the T.C. Borough Architect, 26, Ramsden-street, Huddersfield. Deposit £1.

JANUARY 9.—**London.**—DWELLINGS.—For the erection of a block of dwellings on the Tabard Garden Estate, Southwark, for the L.C.C. Architect, The County Hall, Westminster Bridge, S.E.1. Deposit £3.

JANUARY 9.—**Southport.**—CONVENIENCES.—Construction of underground conveniences in Lord-street, for the T.C. Mr. A. E. Jackson, Borough Engineer, Southport. Deposit £2 2s.

JANUARY 9.—**Tynemouth.**—SCHOOL.—The Education Committee are inviting tenders for the erection of a new elementary open-air school in Lovaine-gardens, North Shields, to accommodate 170 children; and also, by the same date, tenders for a new elementary school at Spring-gardens, North Shields, providing accommodation for 845 children.

JANUARY 10.—**Manchester.**—FLOORS.—For red terra-cotta and for hollow tile floors required in connection with the extension of the Nurses' Home at Booth Hall Infirmary, for the Board of Guardians. Mr. F. H. Overmann, architect, 5, Cavendish-street, All Saints', Manchester.

JANUARY 11.—**Catforth.**—ADDITIONS.—Erection of additions to Village Hall, Catforth. Mr. W. D Stander, architect, "Oak Dene," Catforth, near Preston.

✱JANUARY 11.—**New Malden, Surrey.**—TELEPHONE EXCHANGE.—Erection of a telephone exchange at New Malden, Surrey, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s.

✱JANUARY 15.—**Gateshead.**—TELEPHONE EXCHANGE.—Erection of a telephone exchange at Gateshead, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (payable to the Secretary).

✱JANUARY 15.—**Newport, Mon.**—TELEPHONE REPEATER STATION.—Erection of a telephone repeater station at Newport, Mon, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (payable to the Secretary).

JANUARY 15.—**West Bromwich.**—HOUSES.—Erection of 47 houses on Tantany Estate, for T.C. Mr. A. Wickham, Town Clerk, Town Hall, West Bromwich. Deposit £2 2s.

JANUARY 17.—**Salford.**—HOUSES AND FLATS.—Erection of 62 houses and flats on the Weaste Housing Estate, for the T.C. Mr. G. Westcott, architect, 13, Bridge-street, Manchester.

✱JANUARY 21.—**Reigate.**—NEW LAUNDRY AND EXTENSION OF BOILER HOUSE.—Erection of a new laundry and extension of the boiler house at the Guardians' Institution, Earlswood, for the Reigate B.G. Mr. O. J. Porter, F.S.I., 45, Bedford-row, W.C.1. Deposit £2 2s.

JANUARY 31.—**Hemel Hempstead.**—COTTAGES.—Erection of 24 cottages (in sections of 12), for the Borough of Hemel Hempstead. Mr. Walter R. Locke, Borough Engineer and Surveyor, Market-square, Hemel Hempstead. Deposit £1.

FEBRUARY 2.—**London, S.E. 18.**—EXTENSION.—Proposed extension of premises, for the Committee of the Woolwich Catholic Club. The Secretary, Woolwich Catholic Club, 28–30, New-road, Woolwich, S.E. 18.

✱NO DATE.—**Alperton.**—HOUSES.—Erection of six houses at Alperton. Mr. Alfred A. Aspalak, M.S.A., 25, Victoria-street, S.W.1. Deposit £1 1s.

NO DATE.—**Barnsley.**—ERECTION OF SHOP.—For erection of shop, &c., at the Borough Foundry, for Messrs. Needham Bros. & Brown, Ltd. Messrs. Dyson, Cawthorne & Coles, surveyors, 10, Regent-street, Barnsley.

NO DATE.—**Buxton.**—HOUSE.—Erection of detached house at Buxton. Messrs. Lamb & Walton, architects, 19, Clifton-street, Blackpool. Deposit 10s.

✱NO DATE.—**Chatham.**—ALTERATIONS AND ADDITIONS.—Alterations and additions to the premises of Messrs. Timothy White & Co., Ltd., at 126, High-street, Chatham. Construction Department, 30, Chandos-street, Portsmouth.

NO DATE.—**Horsforth.**—HOUSE.—For erection of detached house at Horsforth. Mr. W. P. Peters, architect, 89, Albion-street, Leeds.

✱NO DATE.—**Ilfracombe.**—Construction of a concert hall at Ilfracombe for the Urban District Council. Messrs. Frank Matcham & Co., 9, Warwick-court, Holborn, W.C.1.

✱NO DATE.—**Teddington.**—HOUSES.—Erection of six houses at Teddington. Mr. Alfred Ospalak, M.S.A., 25, Victoria-street, S.W.1. Deposit £1 1s.

FURNITURE, MATERIALS, etc

DECEMBER 24.—**Elgin.**—ROAD MATERIALS.—For supply of road materials to the Morayshire C.C. Mr. A. Hogg, surveyor, 24, Academy-street, Elgin.

DECEMBER 27.—**Bexley.**—MATERIALS.—Supply to the U.D.C. of tar, highway materials, pipes and stores for one year. Mr. W. T. Howse, Surveyor, Bexley Heath, Kent.

DECEMBER 29.—**Winchester.**—TAR.—Supply of tar for use on roads to the Southampton C.C. Mr. W. J. Taylor, County Surveyor, The Castle, Winchester.

DECEMBER 31.—**Derby.**—MATERIALS.—Supply to the C.C. of tarmacadam, granite and basalt, iron furnace slag, limestone, bitumen, and other surface dressing material. Mr. J. W. Horton, County Surveyor St. Mary's-gate, Derby.

DECEMBER 31.—**Gloucester.**—MATERIALS.—Supply to the Gloucestershire C.C. of materials for road repairs. County Surveyor, Shire Hall, Gloucester

DECEMBER 31.—**Middleton.**—MATERIAI —Supply of road materials, cement, bricks, &c., to the T.C. for six months. Borough Surveyor, Town Hall, Middleton.

DECEMBER 31.—**Reading.**—MATERIALS.—Supply of broken road materials, gravel, and sand for twelve months, for Berkshire C.C. County Surveyor, Shire Hall, Reading.

JANUARY 1.—**Islington.**—WOOD BLOCKS.—Supply of 42,000 creosoted yellow deal paving blocks to the B.C. Borough Engineer, Islington.

JANUARY 1.—**Norwich.**—ROAD MATERIALS.—Supply to the Norfolk C.C. of tar and bituminous materials, tarred slag macadam, and granite. Mr. S. H. Warren, County Surveyor, Shirehouse, Norwich.

JANUARY 5.—**Perth.**—TIMBER.—For hire of timber to be used in erection of Highland and Agricultural Society's Show at Perth, in July. Mr. J. Reid, 55, Blenheim-place, Aberdeen.

JANUARY 7.—**Egypt.**—PAINTS, &C.—Supply of paints, oils, &c., to the Port and Lighthouses Administration, Egypt. Department of Overseas Trade, 35, Old Queen-street, S.W. Reference 11944/F.E./C6.

JANUARY 23.—**Madras.**—PIPES.—Supply of stoneware pipes and specials, ranging from 4 in. to 18 in. diameter, and aggregating a total length of 400,000 lineal ft., for the T.C. Messrs. James Mansergh & Sons, agents, 5, Victoria-street, S.W. Charge 5s.

ENGINEERING, IRON AND STEEL.

DECEMBER 24.—**Petersfield.**—ELECTRIC LIGHT.—For electric light installation at the Poor Law Institution. Mr. A. J. C. Mackarness, Clerk, 16, High-street, Petersfield.

DECEMBER 24.—**Wakefield.**—PLANT.—Supply to the West Riding C.C. of light railway track, trucks, tractors, &c. Clerk, County Hall, Wakefield.

DECEMBER 26.—**Aberdeen.**—INTAKE, &C.—Construction of an intake and screening house, a 5 ft. diameter conduit and ancillary works alongside the River Dee at Cairnton, Invercannie, for the T.C. Mr. George Mitchell, Water Engineer, 41½, Union-street, Aberdeen. Deposit £5.

DECEMBER 29. — **Wellingborough.** — GRITTING MACHINE.—Supply of gritting machine to the R.D.C. Mr. H. G. Cordon, Surveyor, Commercial-place, Wellingborough.

DECEMBER 31. — **Aldershot.** — STEEL WORK. — Supply of the necessary steel work required for the erection of a gantry, for the T.C. Mr. James Neave, Borough Surveyor, Municipal Buildings, Aldershot.

DECEMBER 31.—**Durham.**—BRIDGES.—Designs and tenders for the supply and erection (optional) of a number of steel girder road bridges, on prepared abutments, for the C.C. Mr. Albert E. Brookes, County Engineer, Shire Hall, Durham. Deposit £2 2s.

DECEMBER 31.—**Kempton Park.**—ENGINES, &C.—Supply and erection of two reciprocating engines and pumps at Kempton Park Pumping Station, for the Metropolitan Water Board. Chief Engineer's Department, 173, Rosebery-avenue, Clerkenwell, E.C. Deposit £3 3s.

DECEMBER 31.—**London.**—CRANES.—Supply of (*a*) 3-ton travelling crane, and (*b*) 30 cwt. workshop crane, for the Central Car Depot of the L.C.C. Tramway Manager, Victoria Embankment, W.C. Deposit £2.

DECEMBER 31.—**Stourbridge.**—PIPES.—For supply and delivery of 146 tons of 9 in. cast-iron pipes, for Stourbridge and District Water Board. Mr. W. Fiddian, Stourbridge. Deposit £2 2s.

JANUARY 1.—**Georgetown.**—WATERWORKS PLANT.—Supply and erection of a 250 h.p. crude oil engine and centrifugal pumping set, &c., for the T.C. of Georgetown, British Guiana. Messrs. H. H. Humphreys & Sons, 28, Victoria-street, S.W. Deposit £10 10s.

JANUARY 4.—**London.**—HOIST.—Supply to the South Indian Railway Co. of one 40-ton locomotive hoist. Offices, 91, Petty France, S.W.1. Charge 10s.

JANUARY 4.—**London.**—HYDRAULIC PLANT.—Supply of hydraulic plant to Director-General, India Store Department, Branch No. 12, Belvedere-road, S.E.1.

JANUARY 7.—**Bristol.**—DOCK.—For construction of Eastern Arm, Royal Edward Dock, Avonmouth, for Docks Committee. Mr. Thomas A. Peace, Chief Engineer, Port of Bristol. Deposit £15.

✱JANUARY 7.—**Hove.**—CONCRETE SEA WALL, &C.—Constructing a concrete sea wall, incline, steps and other works incidental thereto and in connection therewith in extending the King's Esplanade, for the B.C. of Hove. Borough Surveyor, Mr. H. H. Scott, Town Hall, Hove. Deposit £2 2s.

JANUARY 7. — **London, S.E.** — CONSTRUCTIONAL WORK.—Construction of a roof of steel and glass and of a machinery platform of steel girders and concrete in No. 1 Shaft, Rotherhithe Tunnel, for the L.C.C. Chief Engineer, The Old County Hall, Spring Gardens, S.W.1. Deposit £3.

JANUARY 7.—**Meathop.**—SLUICE.—Construction of a reinforced concrete tidal sluice on Meathop Marsh, Westmorland, for the Meathop and Witherslack Drainage Board. Mr. E. A. Fulton, Secretary, 14, Finkle-street, Kendal. Deposit £1 1s.

JANUARY 7.—**Smethwick.**—GASHOLDER TANK.—Excavation for and construction of a mass concrete gasholder tank, 187 ft. 6 in. diameter by 37 ft. 6 in. deep, for the T.C. Mr. E. Hardiker, Engineer, Gas Works, Rabone-lane, Smethwick. Deposit £2.

JANUARY 8.—**Birmingham.**—BRIDGES.—For the reconstruction of masonry and steel girder road bridges over the River Tame and the Tame Valley Canal, at Salford Bridge, Erdington, for T.C. Mr. H. H. Humphries, City Surveyor, Council House, Birmingham. Deposit £5.

JANUARY 15.—**Toronto.**—SLUDGE PUMP.—Supply and erection at main sewage pumping station of centrifugal sludge pump, for the T.C. Dept. of Overseas Trade, 3, Old Queen-street, S.W. Reference 12614/ED/EC/2.

JANUARY 16. — **Glasgow.** — REFUSE DISPOSAL WORKS.—Tenders and designs for proposed refuse disposal works at Govan, Glasgow. Mr. W. Greig, Superintendent of Cleansing, 20, Trongate, Glasgow.

JANUARY 16.—**Stoke-on-Trent.**—CRANE.—Fifty-ton electrically-driven overhead travelling crane. Borough Electri al Engineer, Stoke-on-Trent. Deposit £2.

JANUARY 17.—**New Zealand.**—PIPES, &C.—Supply of 10 in., 12 in., and 21 in. steel pipes and fittings, for the Orongorongo-Karori Water Main. Department of Overseas Trade, 35, Old Queen-street, S.W.1.

JANUARY 19.—**Depwade.**—HEATING, &C.—Supply of steel vertical boiler, horizontal semi-Diesel oil engine, dynamo and motors and accumulators, wiring for power and lighting, supply and fixing apparatus for hot-water heating and domestic hot-water supply, at the Poor Law Institution. Vulcan Boiler & General Insurance Co., Ltd., 67, King-street, Manchester. Deposit £1 1s. each for five sections.

FEBRUARY 5.—**Egypt.**—PUMPING PLANT.—For supply and erection of a pumping plant to replace an existing steam plant at Qussassin. Inspecting Engineer, Egyptian and Sudan Governments, Queen Anne's Chambers, S.W.1. Charge 10s.

FEBRUARY 5.—**New Zealand.**—GIRDER SPANS.—Supply of plate girder spans to the Public Works Tender Board, New Zealand, for the Stratford Main Trunk Railway. Department of Overseas Trade, 35, Old Queen-street, S.W. Reference 12569/ED/EC.

FEBRUARY 11.—**Gainsborough.**—PUMPING PLANT.—For engine and pumping plant, for the U.D.C. Mr. S. W. Parker, Waterworks Engineer, Council Offices, Gainsborough. Deposit £2 2s.

FEBRUARY 14.—**Argentine.**—POWER STATION.—For the construction of a central electric power station of 15,000 h.p., for the Argentine State Oilfields Administration. Department of Overseas Trade, 35, Old Queen-street, S.W.

MAY 1. — **China.** — BRIDGE. — **The Commercial** Councillor at Peking has forwarded to the Department of Overseas Trade copies of the official text of a call for tenders by the Hai Ho Conservancy Commission, for the erection of a bridge over the Hai Ho at Tientsin. Tenders must be in the hands of the Commission before noon on May 1, 1924. The cost of erecting the new bridge has been roughly estimated at Tls. 700,000, say £105,000. Department of Overseas Trade, 35, Old Queen-street, S.W. 1. Reference 11647/F.E./E.C./2.

ROAD, SANITARY, AND WATER WORKS.

DECEMBER 22.—**Sheffield.**—SEWER.—For laying of 1,432 lineal yds. of 15 in. and 12 in. pipe sewer at Handsworth, for T.C. Mr. W. J. Hadfield, City Surveyor, Town Hall, Sheffield.

DECEMBER 24.—**Edinburgh.**—DRAINS.—For drainage reconstruction work at Craiglockhart Poorhouse, for Parish Council. Mr. J. M. Johnston, architect, 47, Charlotte-street, Leith.

DECEMBER 24.—**Fort William.**—ROADS.—For the reconstruction of 6¼ miles of roadway between Fort William and Spean Bridge, for the Inverness-shire C.C. Mr. J. Schoolar, Road Surveyor, Fort William. Deposit £1 1s.

DECEMBER 24.—**Haywards Heath.**—LEVELLING.—For extending the level in the Victoria Park for a distance southwards of 100 ft., for the U.D.C. Mr. Geo. Plummer, surveyor, South-road, Haywards Heath.

DECEMBER 24.—**Micklefield.**—PIPES.—For supplying 250 yds. of 15 in. earthenware pipes, and 8 yds. of 15 in. and 8 yds. of 12 in. eathenware pipes. Mr. J. Crosthwaite, Micklefield.

DECEMBER 26.—**Mull.**—ROADS.—Construction of 2½ miles of road in the Island of Coll, for the Argyll C.C. Mr. Arthur MacNaughton, Mull District Surveyor, Tobermory.

DECEMBER 27.—**Leyton.**—ROADS.—For the construction of a new road from Forest-road to James-lane, and the widening and improvement of Forest-road and James-lane, for the U.D.C. Mr. E. H. Essex, Surveyor, Town Hall, Leyton. Deposit £10.

DECEMBER 27.—**Royton.**—ROADS.—For construction of new road from Rochdale-road (deep cutting) to Tandle Hill Park, for U.D.C. Surveyor, Town Hall, Royton. Deposit £3 3s.

DECEMBER 27.—**Stirling.**—SEWERS.—For construction of 500 yds. of 9 in. sewer (fireclay, iron or steel) partly in tunnel, for the Stirling C.C. Mr. G. Thomson, 164, Bath-street, Glasgow. Deposit £1 1s.

DECEMBER 28.—**Failsworth.**—SANITARY.—(*a*) For conversion of 18 privies to waterclosets; (*b*) For supply of 18 sets of sanitary fittings for same. Mr. J. W. E. Brown, Town Hall, Failsworth, near Manchester.

DECEMBER 29.—**Dorking.**—ROADS.—For making-up a portion of South-terrace, for the U.D.C. Mr. S. S. Gettings, Surveyor, Council Offices, Dorking. Deposit £2 2s.

DECEMBER 29.—**Featherstone.**—SEWER.—For relaying of about 1¼ miles of 15 in. diameter outfall sewer (cast-iron and stoneware pipe), for the U.D.C. Mr. Samuel Chesney, Council Offices, Featherstone, near Pontefract. Deposit £2 2s.

DECEMBER 29.—**Southam.**—WATERWORKS.—Supply of 294 tons of 5 in., 4 in., and 3 in. cast-iron spigot and socket pipes; laying about 12,130 lineal yds. of 5 in., 4 in., and 3 in. cast-iron pipes, &c.; and construction of a concrete reservoir at Rectory Farm, Southam, for the R.D.C. Messrs. Taylor & Wallin, Commercial Union Buildings, 47, Pilgrim-street, Newcastle-on-Tyne. Deposit £5 5s.

DECEMBER 29.—**Southwick.**—ROADS.—For making up the carriage-way of St. Aubyns-road, Fishersgate, for the U.D.C. Mr. G. W. Warr, Surveyor, Town Hall, Southwick, Sussex. Deposit £1 1s.

DECEMBER 31.—**Gravesend.**—SEWER.—For constructing a 30 in. cast-iron main effluent sewer (about 134 yds.) into the River Thames, for the T.C. Mr. Frederick T. Grant, engineer, 4, Woodville-terrace, Gravesend. Deposit £1.

DECEMBER 31.—**Hammersmith.**—ROADS.—For (1) compressed asphalte (Waterloo-street); (2) asphalte macadam (part of Blythe-road); and (3) tarred slag macadam (seven roads), for the B.C. Mr. R. H. Clucas, Borough Engineer, Hammersmith, W.

DECEMBER 31.—**Stafford.**—WATER MAINS.—For laying 2,470 yds. of 6 in. dia. cast-iron pipes and special castings: also for laying 650 yds. of 21 in. dia. reinforced concrete pipe sewer, for T.C. Mr. W. Plant, Borough Engineer, Borough Hall, Stafford. Deposit £2 2s.

JANUARY 1.—**Ealing.**—ROADS.—Formation of new road, connecting Gunnersbury-avenue with Gunnersbury-lane, and the improveme.t of Windmill-road, for the B.C. Mr. W. R. Hicks, Borough Engineer, Town Hall, Ealing. Deposit £1 1s.

JANUARY 1.—**Enfield.**—SEWERAGE WORKS.—For construction of 1,500 yds. run of stoneware pipe sewer, &c., at Botany Bay, for the U.D.C. Mr. H. R. Crabb, Surveyor, Public Offices, Enfield. Deposit £2 2s.

JANUARY 1. — **Erith.** — ROADS. — Making-up Woolwich-road and Erith-road, Belvedere, for the U.D.C. Surveyor, Bexley-road, Erith. Deposit £1.

JANUARY 1.—**Rotherham.**—SEWER.—For construction of 9 in. stoneware pipe sewer, manholes, &c., in Herringthorpe-lane and Barnby Moor main road, in Parish of Whiston, for R.D.C. Mr. C. O. Rawstron, Surveyor, Council Offices, Grove-road, Moorgate, Rotherham.

JANUARY 2.—**Ossett.**—FOOTPATHS.—For asphalting or concreting footpaths in Northfield-avenue, Sowood-avenue, Wilson's-avenue, Manor-road and Teall-street, for T.C. Mr. H. Holmes, Borough Surveyor, Town Hall, Ossett.

JANUARY 3.—**Hay (Breconshire).**—WATER CONDUIT. —For necessary works to bring water from springs above Heolinon Farmhouse to Penheolinon, Llandefalle. Mr. Penry C. Lloyd, Estate Offices, Hay.

JANUARY 3.—**Salford.**—ROADS.—For making-up two streets on Weaste Housing Site, for T.C. Borough Engineer, Town Hall, Salford.

JANUARY 4.—**Beddington and Wallington.**—SEWERAGE WORKS.—Laying of about 201 lineal yds. of 9 in. diameter stoneware pipe sewer in Stanley Park-road, Wallington, for the U.D.C. Mr. S. F. E. Carter, Surveyor, Council Offices, Wallington. Deposit £1.

JANUARY 7.—**Barnsley.**—ROADS.—For making-up three back roads within the Borough, for T.C. Borough Engineer, Fairfield House Offices, Barnsley.

JANUARY 7.—**Beckenham.**—ROADS.—For construction of three new roads on Elmers End Estate, for the U.D.C. Mr. J. A. Angell, Surveyor, Council Offices, Beckenham. Deposit £2.

JANUARY 7. — **Catherington, Hants.** — WATER MAINS AND DRAINAGE.—Providing and laying at Cowplain, in the Parish of Catherington, about 1,950 yds. lineal of 6 in. cast-iron water mains; also 900 yds. 4 in. and 2,800 yds. 3 in. ditto, and other drains, &c. Mr. G. E. Vernon-Inkpen, 40, Commercial-road, Portsmouth. Deposit £3 3s.

JANUARY 7. — **Hendon.** — ROADS. — Making-up Ravenscroft-avenue (second portion), Elmcroft-avenue, Beechcroft-avenue, Clifton-gardens, Brooksale-road, Hodford-road (second portion), Greenfield-gardens, and Wycombe-gardens, for the U.D.C. Mr. A. O. Knight, Surveyor, Town Hall, Hendon, N.W. 4. Deposit £5 5s.

JANUARY 7.—**Hendon.**—SEWER.—Construction of 600 yds. of 9 in. stoneware pipe sewer, &c., at Uphill-road and Marsh-lane, Mill Hill, for the U.D.C. Mr. A. O. Knight, Surveyor, Town Hall, Hendon, N.W. 4. Deposit £3 3s.

JANUARY 9.—**Crediton.**—ROADS.—For strengthening and re-surfacing (1) Rock-road, a length of 4¼ miles; and (2) Black Dog, about 3¼ miles, for the R.D.C. Mr. F. Horbury, Surveyor, Fordton, Crediton. Deposit £1 1s.

JANUARY 10.—**Epsom.**—ROADS.—For making-up Manor-road (part of), Cecil-road, Derby-road, Salisbury-avenue, Cheam, for R.D.C. Mr. T. E. Ware, surveyor, Waterloo-road, Epsom.

JANUARY 19.—**Manchester.**—SEWERS.—Construction of main drainage work, for the T.C. City Engineer, Town Hall, Manchester. Deposit £10 10s.

NO DATE.—**Scarborough.**—ROAD.—Construction of new road (about 300 yds. long) at Scarborough. Messrs. F. Mitchell & Sons, Architects, 9, Upper Fontaine-street, Albion-street, Leeds.

Competitions.

(*See Competition News, page* 952).

Auction Sales, Tenders, etc.

JANUARY 1.—**Ashtead, Surrey.**—Messrs. Fuller, Horsey, Sons & Cassell will sell, *re* Alban Richards & Co., Ltd., by order of Mr. D. L. Honeyman, the Receiver for the debenture holders, in lots, at the Joinery Works, Ashtead, Surrey, modern high-class woodworking machinery, four steam wagons and trailers, &c. Auctioneers, 11, Billiter-square, E.C. 3.

JANUARY 8.—**Bristol.**—Messrs. Fuller, Horsey, Sons & Cassell will sell, in lots, *re* W. Alban Richards & Co., Ltd., by order of Mr. D. L. Honeyman, Receiver for the debenture holders, at the Royal Hotel, Bristol, builders' and contractors' plant laying at the Royal Edward Granary, Avonmouth Dock, at Town Hill, Swansea, and other depots. Auctioneers, 11, Billiter-square, E.C.3.

✱JANUARY 15.—**London, N.W.**—Messrs. J. T. Skelding & Co. will sell, by order of Messrs. Tims, Beckett & Partners, Ltd., unreserved clearance sale of the whole of the capital at the works, 38, Harlesden-road, Willesden-lane, N.W., stock of timber, plant and machinery of van and wagon builders, shoeing and general smiths. Auctioneers, 48, Gresham-street, E.C.2.

JANUARY 15 AND 16.—**London, E.9.**—Mr. F. H. Clark will sell, at the National Projectile Factory, Hackney Marshes, E.9, absolutely without reserve, timber and material resultant of the demolition of the above factory. Auctioneer, Railway Wharf, York-road, Wandsworth, S.W.18.

*JANUARY 17.—**North Finchley, N.**—Messrs. Wheeler & Wright will sell the remaining portions of the Westbury Estate at the Torrington Hotel. Auctioneers, adjoining Woodside Park Station, N.

*JANUARY 22.—**London, W.**—Messrs. J. T. Skelding & Co. will sell, by order of Messrs. Selfridge & Co., Ltd., at the Yard, Balderton-street, Oxford-street, W., important unreserved sale of the capital surplus of builders' and contractors' plant and machinery, timber, stores and effects. Auctioneers, 48, Gresham-street, E.C.2.

*JANUARY 24.—**County Down.**—Messrs. Garnet W. Holt & Co. will sell, by public auction, the Crowreach Quarries, Newry, with yard, machinery, plant, &c., on the premises at Catherine-street, Newry, to be sold in two lots. Auctioneers, Newry.

JANUARY.—**London, W.1.**—Messrs. Knight, Frank & Rutley, in conjunction with Messrs. Oakden & Co., will sell, at the Hanover-square Estate Room (unless previously disposed of), by direction of the Eastbourne Waterworks Company, freehold commercial site of about 4¼ acres, with railway facilities and including detached double-fronted residence and factory or warehouse buildings, &c. Auctioneers, 20, Hanover-square, London, W.1.

Public Appointments.

DECEMBER 28.—**Battersea, S.W.11.**—Junior Assistant, Architectural Assistant and Engineering Assistant required in the Borough Engineer's Dept. Mr. Edwin Austin, Town Clerk, Town Hall, Battersea.

*DECEMBER 31.—**Liverpool.**—Three experienced temporary Architectural Assistants required in the Land Steward and Surveyor's Architectural Department by the Finance Committee of the City of Liverpool. Mr. Walter Moon, Town Clerk, Municipal Buildings, Liverpool, endorsed "Architectural Assistant."

JANUARY 1.— **Leeds.** — Instructor in Architectural Construction and Design required at the Leeds School of Art in the Department of Architecture. Director of Education, Education Offices, Calverley-street, Leeds.

*NO DATE.—**Grimsby.**—Architectural Assistant (temporary), with experience of housing schemes. Twelve months' engagement. Borough Engineer, 170, Victoria-street, Grimsby.

Appointment Vacant.

The South Wales Federation of Building Trades Employers is to appoint a whole-time organiser. Applicants must have knowledge and experience of the building trade. Applicants should give details of qualifications, age, experience and salary required to the Secretary, 22, Castle Arcade Chambers, Cardiff, not later than December 31.

"Mechanical World Year Book."

In the 1924 edition of this handbook (Manchester: Emmott & Co., Ltd., price 1s. 6d. net) a new and lengthy section on the combustion of fuel forms a prominent feature. Notes and data are given on the composition and properties of air; air required for combustion; weights and volumes of air and products of combustion; calorific values of fuels—solid, liquid, and gaseous, &c. A new section on the strength of flat plates embodies a concise summary of the various rules for the strength of rectangular, square and circular plates, both *encastré* and simply supported, and includes the results of the more recent investigations. A section on tanks is also included. Notes are given on the thickness of tanks, staying and riveting of tanks, capacities of tanks, &c. In the body of the work various revisions have been effected, while a number of new illustrations have been introduced.

Change of Title.

We are informed by Messrs. The Oxford Steam Plough Company, Ltd., that on and after January 1, 1924, the name of the company will be John Allen & Sons (Oxford), Ltd. The change is purely a nominal one, caused through the expansion of their business. No alteration has taken place in the ownership, management or policy of the company.

Builder's Estate.

Mr. Griffith Williams, of Wallasey-road, Wallasey, Cheshire, retired builder, left £11,046 with a net personalty of £3,216.

NEW COMPANIES.

THE particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 & 117, Chancery-lane, W.C.2, from the documents available at the Companies' Registry.

B. GOODMAN, LTD. (193,464). Registered October 31. 33, Haggerston-road, Dalston, E.8. Housebreakers and contractors, builders, house decorators, &c. Nominal capital, £36,000.

STROUDS (HOUSING SPECIALISTS), LTD. (193,258). Registered October 22. 19, Charing Cross-road, W.C. Building contractors, land developers, surveyors and estate agents, financiers and other agents. Nominal capital, £1,000.

STEEL & Co., LTD. (193,287). Registered October 23. Builders' merchants, iron founders and heating engineers, now carried on by Katharine Harriette Steel, at Trimdon-street Foundry, and Paley-street, Sunderland, under the style of Steel & Co. Nominal capital, £15,000.

IRLAM BRICK CO., LTD. (193,279). Registered October 23. 42, Deansgate, Manchester. Manufacturers and dealers in bricks, fire-bricks, tiles, pottery, &c. Nominal capital, £15,000.

SAMUEL JEFFERIES & SONS, LTD. (193,342). Registered October 25. Dudbridge, near Stroud, Gloucester. Brick and tile manufacturers, coal merchants, farmers, hauliers and engineers, heretofore carried on by Messrs. Albert Edward Jefferies, Charles Richard Jefferies, and Stephen Arthur Jefferies, under the style of Samuel Jefferies & Sons, at Stroud, County of Gloucester, and elsewhere. Nominal capital, £5,000.

BRIGHTON ESTATES, LTD. (193,393). Registered October 29. 8, Pavilion-parade, Brighton. To acquire lands, buildings, and hereditaments, and turn same to account. To carry on the business of builders, contractors, &c. Nominal capital, £1,000.

LOUGH BROTHERS (CONTRACTORS), LTD. (193,407). Registered October 29. 4, The Crescent, Consett, Co. Durham. Builders and general contractors, &c. Nominal capital, £5,000.

HENSALL CONCRETES, LTD. (193,460). Registered October 31. 28, Eldon-street, Barnsley, Yorks. Quarry-owners and masters, tar macadam and brick manufacturers, manufacturers of road-making materials, &c. Nominal capital, £4,000.

HARGATE BUILDING CO., LTD. (193,544). Registered November 3. 100, King-street, Manchester. Builders and contractors, quarry owners and road-makers. Nominal capital, £10,000.

WILLETT WORKS, LTD. (193,478). Registered October 31. Willett Building, Sloane-square, Chelsea, S.W. Builders, contractors, paviors, &c. Nominal capital, £7,500.

F. BRACEY (ROADS), LTD. (193,465). Registered October 31. 182, Hagden-lane, Watford, Hertford. Road and sewer contractors, &c. Nominal capital, £600.

ECCLESTON ESTATES, LTD. (193,585). Registered November 6. 22, Chancery-lane, W.C. 2. Brick, pipe and tile manufacturers, and to carry on and execute all kinds of financial, mercantile, commercial, trading, and other operations. Nominal capital, £20,000.

WM. SCOTNEY & SONS, LTD. (193,624). Registered November 7. Ramsey-road, St. Ives, Huntingdon. Timber merchants, builders, poultry appliance makers, and general merchants. Nominal capital, £3,000.

S. M. H. Co., LTD. (193,576). Registered November 5. Estate Office, Elm Park-avenue, Stamford Hill, N. 15. Estate developers, builders, and contractors. Nominal capital, £1,000.

FINNEGAN CONTRACTORS, LTD. (193,781). Registered November 15. Builders, contractors, constructors, house agents, surveyors, and architects, &c. Nominal capital, £5,000.

C. BENNETT, LTD. (193,652). Registered November 9. 68, Whitworth-street West, Manchester. Joiners, builders, contractors, &c. Nominal capital, £750.

THE SMOKE INSPECTOR'S HANDBOOK.*

IT is now two years since the report of Lord Newton's Committee on Smoke Abatement was published, and yet no action has been taken by the Government to enforce any of the suggestions contained therein. However, we have not yet abandoned hope that some Government in the not too distant future will see fit to lessen the immense waste of our national resources, to improve the health of the community, to bring sunshine into our town, to protect our buildings, to prevent a vast and needless expenditure in laundry, painting and cleaning, by revising and bringing up to date the regulations dealing with smoke emission.

When such an event comes to pass, the use of Mr. Clinch's book will be even greater than it is at present; meanwhile, it is fulfilling a very real need. Smoke inspecting requires considerable technical knowledge, and Mr. Clinch has assembled all the relevant matter in ten chapters, dealing respectively with Heat, Energy, Fuel, Fuel Combustion, Stoker's Work, Draught, Flue Gases, Smoke, Economisers, Boilers, and Mechanical Stokers. There is a short concluding chapter on "The Law Relating to the Emission of Smoke." But this is a matter which has been fully dealt with elsewhere. The book is amply illustrated.

Although smoke inspecting is a highly specialised task, and scarcely remotely connected with architecture, nevertheless it behoves the architect to know something of the conditions which tend to minimise the production of smoke, and the merits of the various methods of firing and of stoking—the latter not being, as is so often imagined, merely a matter of muscular energy, but rather a skilled job requiring knowledge and intelligence, qualities well worth paying for, since bad stoking must be the cause of an unnecessary loss of millions of pounds.

We think, therefore, that this book may be of more than passing interest to architects whose practice deals with factories. There is an interesting introduction by Mr. Cyril Banks (Chief Medical Officer of Health for the County Borough of Halifax), in which he points out that, although the domestic hearth is responsible for most of the smoke evils, this must not be taken as an indication that the smoke of factories is negligible. The smoke menace must be combated from every side, and all who desire to see an A 1 nation must take part in the attack.

Society of Engineers.

The following premiums have been awarded for papers read before, or published by, the Society of Engineers during 1923:—President's Gold Medal to Mr. J. W. Gordon, K.C., for his paper on "Railway Surveying by Photography"; Bessemer Premium (value £5 5s.) to Mr. Mauclere for paper on "The Pneumatic Handling of Petrol and Other Inflammable Liquids"; Nursey Premium (value £3 3s.) to Mr. A. Hiley for paper on "The Impact of Imperfectly Elastic Bodies with Particular Reference to the Effect of the Hammer Blow in Pile Driving"; Bernay's Premium (value £3 3s.) to Mr. A. Ferguson for paper on "A New Entirely Automatic Machine for the Mass Production of Glass Bottles"; Society Premium (value £3 3s.) to Mr. A. S. E. Ackermann for paper on "The Physical Properties of Clay (fifth paper) and the Dynamics of Pile-Driving"; Clarke Premium (value £5 5s.) to Mr. R. C. Hill for paper on "Work Beneath the Waves," read before the Gloucestershire Engineering Society, associated with the Society of Engineers; Geen Premium (value £5 5s.) to Mr. H. F. Jones for paper on "Boilers," read before the Crystal Palace Engineering Society, associated with the Society of Engineers.

*_The Smoke Inspector's Handbook; or, Economic Smoke Abatement._ By H. G. Clinch, M.R.San.I., M.I.A. (London: H. K. Lewis & Co., Ltd.). 7s. 6d. net.

PROPOSED NEW BUILDINGS & OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C for Rural District Council: E.C. for Education Committee; B.G. for Board of Guardians; L.C.C. for London County Council: B C. for Borough Council; and P.C. for Parish Council.

BARMOUTH.—An enquiry has been held by the Ministry of Health into the application of the U.D.C. to borrow £5,000 for sea erosion works and for repairing the promenade.

BARNSLEY.—Plans passed by T.C.: Hey & Pashley, 12 houses, Dodworth-road; W. Storrs, four bungalows, Westbourne-grove; D. R. Snowden, three houses, Upper Sheffield-road; J. Grierson, conversion of one house into two flats, at Beech-grove; J. Dunk & Sons, six houses, Clyde-street; Keys & Trimby, two houses, Carlton-road, Smithies; H. Hibbert, one house, Grace-street; W. Storrs, 20 houses, Woodstock-road; W. Bowden, bungalow, Lund-lane; L. W. Williamson, bungalow, street off Lund-lane; G. Edson, two houses, Allendale-road, off Honeywell-lane; E. S. Graham and F. Potter, two houses, Locke-avenue; Mrs. I. Turner, house, Westville-road; M. Kilbride, house, Woodstock-road; Mrs. M. E. Tonra, house, Woodstock-road; C. Tyas and Miss E. A. Tyas, two houses, Woodstock-road; C. W. Plastow, house and garage, Locke-avenue; D. R. Snowden, lock-up shop, Upper Sheffield-road; C. H. Croft, house, Barnsley-road, Stairfoot; M. Gelder, eight houses, Dodworth-road; Hey & Pashley, eight houses, West End-road, off Dodworth-road; R. Cawthrow and J. Linacre, two houses, Well-lane, Monk Bretton; W. J. & J. G. Deighton, nine houses, Blenheim-road; H. S. & J. A. Horne, two houses, Blenheim-road; A. Senior, two houses, Keresforth Hall-road; W. Gothard, six lock-up shops and offices, Eldon-street and Regent-street South; J. Hood, two bungalows, Thoresby-avenue, Monk Bretton; Mrs. S. A. Tinker, alterations to two cottages, Bleach Croft; Read & Shaw, two bungalows, Lund Wood; Needham Bros. & Brown, erecting shop and new brass shop to foundry, Pontefract-road.

BATLEY.—The B.C. have approved of plans and estimates for the erection of 14 houses on the Bradford-road estate, at an estimated cost of £14,107. Application is to be made to the M.H. for sanction to borrow.——Plans passed: Conversion in Purlwell-lane for St. Anne Sunday School; fish restaurant in Alexander-road, for Mr. W. Thompson; bungalow in Fort Anne-road, for Mr. Thomas Elliott; house in Sykes-lane, for Mr. Frank Binks.

BEDWORTH.—The Parochial Committee has approved an amended scheme prepared by the surveyor for sewage works, at an estimated cost of £9,263.

BIGGLESWADE.—Plans passed by R.D.C.: Pair of houses, at Edworth, for Mr. T. H. Smyth; two houses at Henlow, for Mr. Alfred Beaumont.

BLACKBURN.—Plans passed by T.C.: Sausage works, Beardwood, by Mr. J. H. Entwistle; house, Lammack-road, by Mr. A. Mallinson; four houses, Fecitt-road, by Messrs. John Fecitt & Sons, Ltd.; house, Featherbed-road, by Mr. J. Ashworth; five houses, Lambeth-street, by Mr. F. A. Robinson; house, Featherbed-road, by Mrs. Duxbury; two houses, Azalea-road, by Mr. James Thompson; 14 houses, Willis-street, by Mr. H. Southworth; house, Maria-street, by Mr. J. T. Halliwell; six houses, Brothers-street, by Mr. Felton; three houses, Black-a-Moor-road, by Mr. Joshua Grimshaw; three houses, Queen's-road, by Mr. J. Grimshaw; four houses, Langham-road and Eldon-road, by Mr. Hy. Thompson; two houses, Norfolk-street, by Mr. John Duckworth; four houses, Branch-road, Lower Darwen, by Mr. A. Johnson; two houses, St. Francis-road, by Mr. H. Southworth; four houses, Lynwood-road, by Messrs. Penny Bros.; four houses, Green-lane, by Mr. A. Riding; four houses, Ramsey-road, by M.. Thomas Brogden.

BLYTH.—Plans passed by T.C.: Shop, Croft-road, for Blyth Land Co.; house, Disraeli-street, for Mr. T. P. Cook.

BOSTON.—A new housing scheme, under the Act of 1923, has been submitted to the T.C. by Mr. F. Peck, Chairman of the Sanitary Committee, and generally approved. The details are to be worked out by a special sub-committee.

BOURNEMOUTH.—Sir Charles Nicholson has submitted plans to the Building Committee of a new church to be erected in the Springbourne district, in the place of the present St. Mary's Church, at an estimated cost of £13,000, the seating accommodation being for 600 persons.

BRADFORD.—Subsidies have been agreed to by the T.C. in regard to the erection of the following houses: Foster Bros., Whitby-road (4); W. Harrison, Sunnybank-road (3); J. W. Pickles, Bradford-road and Moorlands-place (2); Cansfield & Sons, Rooley-Lane (5), Mayo-avenue and Mayo-grove (14); B. Wainwright, Lees-road, Eccleshill (1); R. J. Patchett, Ltd., Nursery-road, Gt. Horton (5); Wilfred Turner, Royds Hall-lane, Buttershaw (1); Smith Priestley (agent, T. Riley), Hawes-road, Wibsey (6); W. Pickering, Quarry-street, Heaton (1); Ellis Balmforth & Sons (agents, Spencer & Sharp), Melrose-street, Great Horton (7); Clarence A. Gadie, Wharncliffe-drive (4); Groves & Greenwood, Beechwood-drive (11); Walton & Wilkinson, Haworth-road (4); Mrs. J. A. Williamson, Haworth-road (2); Dalby & Hutchinson (agent, A. Varley), Norman-avenue, Eccleshill (2); J. J. Leach (agent), W. Illingworth), Baring-avenue (12); Mrs. E. Smith, Norman lane, Eccleshill (2); T. R. Robinson (agent, T. Riley), Woodlands-terrace (8).——Included among plans passed by the Street Improvement and Buildings Committee last week, were those for the first instalment, numbering 104, of the houses to be erected under the auspices of the Bradford Council of Social Service.

BRIDLINGTON.—A Ministry of Health inquiry has been held into the application to borrow £54,000 for the south side of the new sea wall, under the unemployment scheme, and for £6,500 for the purchase of property in Quay-road for municipal offices.

BROMLEY.—Plans passed by T.C.: Mr. A. A. Webb, bungalow, Sunningdale-road; Mr. W. J. Harrington, house, Park-avenue; Mr. S. G. Soper, house, King's-avenue; Messrs. Woodhams (Bromley), Ltd., house, Hawthorne-road.

BURNLEY.—The Ministry of Health has sanctioned the borrowing by the Corporation of £4,910 for machinery and £1,950 for buildings in connection with the installation of ice-making plant at the cold-air stores. In addition, the Ministry have agreed to the borrowing of £2,657 for the provision of a bowling green, tennis courts, and a shelter at Ightenhill, and of £1,600 for four hard tennis courts with shelter at Barden recreation ground.

CALVERLEY.—Plans passed by U.D.C.: House at Brookfield-avenue, for Mr. Haigh.

CAMBRIDGE.—Plans passed by T.C.:—Three houses, Storey's-way, H. C. Buttress; two houses, Hills-road, H. C. Buttress; six houses, Hartington-grove, J. R. Bennett & Sons; three houses, Barton-road, W. Saint, Ltd.; house, Highworth-avenue, D. Onyett; house, Storey's-way, Rev. E. H. Askwith; two houses, Milton-road, H. C. Buttress; outbuildings, Clare-road, M. Burkitt; house, Belvoir-road, J. T. Wallman; parish room, Trumpington-street, the Rector and Churchwardens; house, Storey's-way, G. Walker; house, Storey's-way, Mrs. H. C. Stewart; house, Storey's-way, Mrs. F. Jenkinson.

DEWSBURY.—Plans passed: Reconstruction of premises in Westgate, for Liverpool & Martin's Bank, Ltd.; two houses on Wakefield-road housing site, for Mr. A. Hinchliffe; two houses, Heald's-road, for Messrs. Sharp & Battye; two houses, in Slaithwaite-road, for Messrs. Fisher & Rawlinson; house, Wakefield-road site, for Mr. C. H. Hirst; new offices and warehouse, at Dewsbury Mills, for Messrs. Wormalds & Walker, Ltd.; house, Wakefield-road site, for Mrs. J. H. Blackburn; store and warehouses at Dewsbury Mills, Thornhill-road, for Messrs. Wormalds & Walker, Ltd.; two houses, Leeds-road, for Hamer & Brooke; two houses at Whitley Lower, for G. & H. Asquith; six houses, South-street, Saville Town, for Mr. J. Crossley, Jnr.; houses at Healds-road, for Mr. A. Hirst; house at Wakefield-road, for Mr. Richards; house at Moor End-lane, for Mr. N. Greenwood; two houses, for Messrs. Jackson & Dewsnap.

DOVER.—The T.C., having considered a scheme for an extension of the sea baths, at an estimated cost of £4,662, has decided that the Borough Surveyor shall prepare a cheaper scheme.

DUNDEE.—Plans passed by the T.C.: House, Americanmuir-road, for the Misses Philip; house, Blackness-road, for Miss E. S. McGregor; dairy premises, North-street, for the Dundee Pasteurised Milk Co., Ltd.

EARLSTOWN AND NEWTON.—The U.D.C. has decided to erect 50 additional houses.

EASTBOURNE.—Plans passed by R.D.C.: Bungalow at Alfriston, for Mr. C. Bruce, Mr. H. Wilson, builder; house, Dittons Farm, Westham, for Mr. H. Marshall, Mr. A. G. Payne, builder; house, Dittons Farm, Westham, for Mr. H. Turner, Mr. J. F. Cornwell, architect.

EAST HAM.—Plans passed by B.C.: Nine houses, 57–73, Monmouth-road, Herapath Bros.; three houses, Flanders-road, adjoining "White Horse," T. H. Lethaby & Co.; four houses, Tilbury-road, Stokes & Sons; three houses, 72, 74 and 76, Monmouth-road, J. W. Lohden; foundry, Forest View, C. Binks; dairy, corner of Masterman-road and High-street South, W. Bradley & Son; power house, factory, North-end, Boleyn-road, C. Hayscy.

EDINBURGH.—The Dean of Guild Court has granted warrants as follows: To D. Borthwick, for bungalow at Dovecot-road, Corstorphine; G. Paterson, semi-detached houses at Templeland-road, Corstorphine; Thomas Webster, two villas at Ladywell-road, Corstorphine; and Mrs. M. Grieve, house at Davidson's Mains.

FARNHAM.—Plans passed by R.D.C.: House, Tilford, for Mr. A. J. Craddock; house at Rowledge, for Mr. L. Shrubb; two bungalows at the Hog's Back, Seale, for Mrs. J. W. Browne; house at The Sands, Seale, for the Crooksbury Estate, Ltd.

FARSLEY.—Plans passed: Bungalow, in Red-lane, for Mr. E. A. G. Wilson, to rank for subsidy.——The Council has received sanction from the M.H. for the erection of 50 houses by private enterprise, all of which are to rank for subsidy.

FORMBY.—Plans passed by U.D.C.: Detached house, Piercefield-road, for Mr. A. Ashridge; two houses, Argarmeols-road, for Mr. H. Longman; three pairs of houses, Old Mill-lane, for Mr. J. E. Sanders; house and garage, Kirklake-road, for Messrs. J. & H. Burroughs; pair of houses, Rimmer's-avenue, for Mr. T. Rimmer; house and shop, Four Acres-lane.

GLASGOW.—The contributors of the Victoria Infirmary have decided to erect a new wing extension, at an estimated cost of £100,000.

GRIMSBY.—An inquiry has been held by Mr. P. M. Crosthwaite into an application of the T.C. for sanction to borrow £31,000 for work in connection with sewage disposal.

GUISELEY.—The proposed new Church Sunday School which is estimated to cost £6,000, will be commenced in the early spring. The site has been acquired through the generosity of a local resident and about £4,200 has also been raised for the building fund.

HEMSWORTH.—At a meeting of the Health and Housing Committee intimation was received of the intention of the South Kirkby, Featherstone, and Hemsworth Collieries Co. to build 300 or 400 houses in the Fitzwilliam area of the Hemsworth district. It was agreed that when plans were submitted the Council would lay the necessary sewers.——Plans passed by R.D.C.: Twenty-eight houses at Grimethorpe, for the Carlton Main Colliery Co., Ltd.

HOUGHTON-LE-SPRING.—Plans for 39 houses at Fence Houses, for the Lambton and Hetton Collieries, Ltd., have been passed by the R.D.C. The Housing Committee has reported that new tenders had been received for the erection of eight "A" type houses on the East Rainton site, and that of Messrs. Dyson Lindsley & Co., Chester-le-Street, had been provisionally accepted and submitted to the Ministry of Health for sanction.

HOVE.—Plans passed by T.C.: Mr. G. Hutton for Mr. H. C. Hillier, house, Holland-road; Mr. D. S Matthews, conversion into flats, 9, Fourth-avenue; Mr. D. S. Matthews, conversion into flats, 66, Tisbury-road; Messrs. J. H. Hackman, Ltd., 10 semi-detached houses, Portland Villas; Mr. A. W. Scamell for Mr. P. B. Swain, stores, 42, Brunswick-square; Mr. F. G. Giebeler, addition, 29, Brooker-street; Mr. A. Perkins for Mr. C. E. C. Bovey, riding school, Eaton-grove; Messrs. W. H. Woodroffe & Son, new roads, Hogarth-road, Reynolds-road, and extension of Lawrence-road; Messrs. Turner & Wells for Mr. Poiney, bungalow, Erroll-road; Messrs. Turner & Wells for Mr. B. A. Pigott, bungalow, Erroll-road; Mr. W. H. Overton for Mr. Marchant, eight houses and 12 motor garages, Lawrence-road; Mr. H. Buckwell for Mrs. P. Jones, conversion into flats, 47, Brunswick-square; Mr. R. Mitchell, pair semi-detached houses and garages, Old Shoreham-road; Mr. C. Boast for Mrs. H. Holford, conversion into flats, 49, Carlisle-road; Messrs. Turner & Wells for Mrs. Young, proposed bungalow, Erroll-road; Mr. F. A. Crouch for Mr. W. J. Short, detached house, Modena-road; Messrs. Norman & Burt for Dr. F. W. Brookes, detached house, Hove-street; Mr. A. Emery for Mrs. S. Emery, house, Furze Hill; Mr. P. B. Hunter for Mrs. Fletcher, house, Nizell's-avenue; Messrs. J. Parsons & Sons for Miss Scovell, conversion into flats, 47, Brunswick-place; Mr. W. H. Overton for Mr. E. Boam, house, Langdale-road; Messrs. T. Garrett & Son for Mr. W. Bennett, bungalow, Old Shoreham-road.

HUCKNALL.—Great activity prevails in the building trade in this district. At the last meeting of the District Council plans were passed for the erection of 20 houses.

KIDDERMINSTER.—Plans passed: House in Connaught-avenue, for Mr. Johnson; house in Sutton Park-road, for Mr. Walker; house at Aggborough, for Mr. J. Ferguson; house at Aggborough, for Mr. C. Brooke. The above plans include for subsidy the proposed houses by Messrs. Johnson, Walker & Ferguson.

LEICESTERSHIRE.—The County Council's Education Committee propose to erect a new elementary school at Ibstock to accommodate 680 children. A tender amounting to £10,418 has been provisionally accepted with a Coalville firm of contractors.

LIVERPOOL.—Over 1,000 plans from private builders have been received, of which over 500 have been passed, under the £75 subsidy scheme, which is available for any house up to 950 square feet floor space.——The Tramways' Committee has decided to spend £200,000 upon tramways extensions.

LONDON (CITY).—The Corporation has resolved to widen St. Martin's-le-Grand to eighty feet, from Newgate-street and Gresham-street; Gresham-street, from St. Martin's-le-Grand to Foster-lane, to 50 feet; and Cheapside, in front of Sweeting's-corner to the junction with St. Martin's-le-Grand, to about 95 feet.

LONDON (STEPNEY).—The B.C. proposed to take steps towards erecting municipal buildings at Arbour-square.

MAIDSTONE.—Plans passed by T.C.: Tonbridge-road, shop and house, for Mr. F. H. Rowcroft; house, for Mr. Wood; Loose-road, five bungalows, for Mr. S. Bratchell; Curzon-road, bungalow, for Mr. O. Bramley; Old Tovil-road, two houses, for Messrs. Clarke & Epps; Marsham-street, addition of sanitary annexe for the Committee of the West Kent General Hospital.

MATLOCK.—The U.D.C. has decided on a scheme for the demolition of an old block of shops in Crown-square, and for the erection of shops for the tenants in Imperial-road.——Plans for a new dining-room and concert hall at Rockside Hydro, and for a number of houses and shops on the land between the Police Station and Lime Grove-avenue have been passed by the U.D.C.

MEDOMSLEY.—In connection with the Miners' Welfare Scheme the local colliery proprietors have combined for the purposes of purchasing a new motor ambulance, and the erection of garage and house for the ambulance driver. Plans for the buildings have been approved. The site is situate near the "Hat and Feather" Inn, Medomsley. The Consett Iron Co. are to supply all the necessary building materials at cost price, and the estimated cost is about £2,500.

NORMANTON (YORKS).—Plans passed: Twelve houses in Dalefield-road, Normanton, for Messrs. Knowles & Kirk; 2 houses, in Ashfield-street, for Messrs. F. Smith & G. Carter.

NOTTINGHAM.—The Extension Committee of the General Hospital has decided to have plans prepared for extensions on the reservoir site.

OSSETT.—Plans passed: House, in Broomcroft, for Mr. Wilfred H. Knight; house, in Belgrave-street, for Mr. Wilson Rigg; extension and alterations of existing sub-station in Wesley-street, for Messrs. Clay Bros.

PONTEFRACT.—Plans passed: New road and sewer in Mayor's-walk, for Mr. R. Marshall; house in Baghill-lane, for Mr. A. Pease; bungalow in Mayor's-walk, for Mr. J. T. Miller.——The T.C. recommended that plans and specifications of 10 houses at Wakefield-road site and 24 houses on the Baghill site be approved, and that the Council invite separate tenders for the work.

* See also our List of Contracts, Competitions, etc.

PORTOBELLO.—The Edinburgh City Architect has been asked to submit a report on the question of providing a shelter to bandstand on promenade, etc.

PUDSEY.—Plans passed: Bungalow in Cemetery-road.——The Council are to seek sanction to borrow £3,000 for the purposes of the housing scheme subsidy.

READING.—The T.C. has been asked to consider a proposal for the conversion of Reading Gaol into residential flats as a means of relieving the housing shortage.——The Thames Conservators have approved plans for a new bridge over the Thames at Reading, to take the place of the present Caversham Bridge. The new bridge, which is to be constructed by the Corporation, will be of reinforced concrete, and will have two spans.

ROTHERHAM.—At a meeting of the U.D.C., housing plans for 100 houses, to be built by Mr. Wadsworth Howard, at Bromley, were approved.—It was reported that the Council had conferred with representatives of some of the colliery interests in the district with a view to their building houses, and, subject to the sanction of the Ministry of Health, the companies had indicated their willingness to build an equal number of houses, with a subsidy from the Council, as the Council is willing to build.

RUNCORN.—Plans passed: New club house and recreation ground, for the British Legion Club, on a site in Thomas-street and Dover-street.

SALTCOATS.—The T.C. has received a deputation of local fishermen who request the construction of another breakwater to prevent their craft from being damaged by the heavy backwash which constantly takes place. A committee has been appointed to investigate the request and prepare a suitable scheme.

SHEFFIELD.—Plans passed by T.C.: New street, Parkhead-crescent, for Mr. A. J. Belton; new street, Dalewood-road extension No. 1, for Mr. Frank Crawshaw; bungalow, Selbourne-road, for Mr. P. Parry; bungalow, Hollinsend-road, Gleadless, for Mr. Wm. Ward; two houses, Edge Bank, Machon Bank-road, for Mr. W. Moorhouse; house, School Green-lane, for Mr. G. E. S. Jarvis; six houses, School Green-lane, for Messrs. H. & D. Blenkhorne; six houses, Rundle-road, for Mr. W. Ramsey; house, Dalewood-road, for Mr. C. V. Brindley; house, Trap-lane, for Mr. J. Vickers; house, Derbyshire-lane and Norton Lees-lane, for Mrs. A. Parkin; two houses, Moorbrook-road, for Mr. H. N. Vann; house, Huntsman's-road, for Mr. J. W. Brusby; house, Dalewood-road, for Mr. E. Johnson; two houses, Chesterfield-road, for Mr. R. Jones; house, Main-road, Handsworth, for Mr. Ernest Allen; bungalow, Dalewood-road, for Mr. F. Wentworth; 144 houses, Manor Estate, for Estates Committee, Sheffield Corporation; house, dancing hall, and sports pavilion, Brincliffe-hill and Chelsea-road, for Mr. J. W. Shaw; two houses, Montgomery-road, for Messrs. Dyson & Co.; four houses, Carter Knowle-road, for Mr. A. J. Belton; 17 houses, Whirlowdale-road, for Mr. J. Middleton; two houses, Canterbury-avenue and Chorley-road, for Mr. J. Wilfrid Sivil; house, Bromwich-road, for Mr. Cyril Parker; two houses, School Green-lane, for Mr. W. R. Wilson; house, Bellhouse-road and Oakes-lane, for Mr. H. Oxspring; house, Linscott-road and Camping-lane, for Mr. A. France; bungalow, Redmires-road, for Mr. W. R. Haywood; bungalow, Redmires-road, for Mr. Harold Hindley; bungalow, Dalewood-road, for Mr. Dunn; 42 houses, Parkhead-crescent, for Mr. A. J. Belton; two houses, Hunting Tower-road, for Mr. E. Davy; four houses, Peveril-road, for Mr. Riley Watson; two houses, Huntingtower and Tullibardine-roads, for Mr. Moses Simpson; two houses, Rupert-road, for Miss Winifred M. Belchamber and Miss Eva F. Kingham; house, Hessle-road, for Mr. F. A. Mutcham; house, Marion-road, for Mr. C. Morley; house, Trap-lane, for Mr. J. Vickers; two houses, Abbey and Cow-lanes, for Mr. W. S. Coey; four houses, off Richmond-road, for Messrs. W. & E. Sadler; bungalow, off Richmond-road, for Mr. G. Taylor; bungalow, off Richmond-road, for Mr. W. Jones; house, Richmond-road, for Mr. A. Pick; bungalow, School Green-lane, for Mr. C. W. Jowsey.

SHIPLEY (YORKS).—An inquiry has been held by the Ministry of Health into the U.D.C. application for sanction to borrow £680 for the purchase of a site on which to erect a small-pox hospital at Heaton Royds. The provision of this hospital is a matter of very great urgency.

SILSDEN.—Plans passed: New warehouse at Airedale Shed.

SPENBOROUGH.—Plans passed by U.D.C.: Proposed warehouse at Oxford-road, Gomersal, for Mr. W. Smith; 6 houses at Oxford-road, Gomersal, for Mr. H. Thornton.——It is also proposed to lengthen the large bath, and tenders for this work are to be invited.

STOCKSBRIDGE.—The West Riding Education authority has approved of a site, comprising about 10 acres, at an estimated cost of £1,000, situated near the housing site at Shay House-lane, Stocksbridge, for the erection of a new elementary school.

STOCKTON.—A scheme for the construction of a new bridge at Newport into the Borough of Stockton has been approved by the T.C., and an early start with scheme is to be made.

STOCKTON-ON-TEES.—Plans have been approved for alterations to the White Swan Hotel, Norton, and for eight houses in Grange-avenue, for Mr. J. S. Earnshaw.

SUNDERLAND.—The Housing Committee of the Corporation has passed plans for the erection of 102 houses by local builders, all of which are to rank for subsidy.——The Bath's Committee of the Corporation has decided to erect a new plunge bath in Kayll-road, size of new bath is to be 100 ft. long and 25 ft. wide.

THROCKLEY.—Plans passed for the erection of a picture house in Rokeby-street Lemington, for Mr. J. W. Armstrong.

TYNEMOUTH.—Plans passed by T.C.: Warehouse to shop at corner of Queen Alexandra-road and Preston-road, by Mr. W. Stockdale, for Messrs. Jones & Barnsley; conversion of canteen premises to offices, by Messrs. Cackett & Burns Dick, for Messrs. Smith's Dock Co.; semi-detached houses, Kenners' Dene Estate, by Mr. A. K. Tasker, for Messrs. J. F. Newbold & Co.

UPPER RENFREWSHIRE.—Plans passed: Forty terrace houses, each of six apartments, at Ormonde-avenue, Muirend, Cathcart, for John Dickie & Son, builders; bungalow of five apartments at Carolside-avenue, Clarkston, for John M'Callum, builder; cottage at Kilmarnock-road, Newton Mearns, for Robert Carswell, Eaglesham; bungalow at Southfield-avenue, Potterhill, Paisley, for David Ralph, Paisley; 30 terrace cottages, each of five apartments, at Netherlee, Cathcart, for A. Mitchell & Sons, Ltd., builders, Cathcart; double bungalow (two houses), each of six apartments, at Busby-road, Giffnock, for the Southern Building Company, 480, Pollokshaws-road, Glasgow; two double bungalows (four houses), each of five apartments, at Percy-drive, Giffnock, for Philip Thomasson, builder, Motherwell; and bungalow of six apartments and new road, Davieland Estate, Giffnock (South), for John Mackie, Pollokshields.

UTTOXETER.—Plans passed by U.D.C.: Pair semi-detached houses, Heathfield-row, for Messrs. Jones & Brassington; pair semi-detached houses, Heathfield-road, for Messrs. Duncombe & Wood; house, Heathfield-road, for Messrs. J. Chell & Son; house, Heathfield-road, for Messrs. Ward & Godbehere; house, Heathfield-road, for Mr. J. Russell; house, Heathfield-road, for Mr. J. Ryder.

WAKEFIELD.—Plans passed by City Council: 2 houses in May Bush-road, for Messrs. A. & J. E. Stead; 2 houses in Back Hatfield-street, for Mr. W. Smith; 2 houses in Horbury-road, Lupsett, for Mr. R. H. Lockwood; and 2 houses in Bramley Mount, for the Misses L. & M. Horne.——Application is to be made to the M.H. for sanction to raise a loan of £21,526 to meet the cost of erecting 50 additional houses of the working-class type on the Portobello Estate.

WIDNES.—Mr. K. North has held an inquiry as to the Corporation's application to borrow £12,000 for private street improvement work in Farnworth South district.

FIRES.

BARNSLEY.—A fire occurred at Needlewood Hall, Heresforth Hill-road, the residence of Mr. J. S. Petch, estate agent to Captain Bruce Wentworth, and damage estimated at thousands of pounds was done.

COALBOURNBROOK.—Damage estimated at between £5,000 and £6,000 was done by a fire which occurred on Saturday last at the works of Mr. A. H. Guest, builder, contractor, and timber merchant, of Coalbournbrook, near Amblecote, Stourbridge.

HOUNDSDITCH.—A destructive fire has occurred at the premises of Messrs. Freedman & Pearl, importers and general merchants, at 130, Houndsditch, E.

NEW BUILDINGS IN LONDON.

A new cinema is now being erected under the name of the Euston Cinema, at 81, Euston-road, N.W. Mr. S. Gordon Jeeves, M.S.A., Architect, 4, George-street, Hanover-square, W. 1. Quantity surveyor, Mr. W. H. Webber, F.S.I., 33, Furnival-street, E.C. 4. General contractors, Messrs. Robert Young's Construction Co., Ltd., Canonbury Works, Canonbury-street, N. 1. Sub-contractors are as follows: Plenum installation, piping system central heating, internal plumbing work, sanitary fittings, drainage, fire hydrants and gas supply are by Messrs. Stitson, White & Co., 102, Victoria-street, Westminster, S.W. 1; steel casements and metal front to pay box, W. James & Co., Hythe-road, Willesden Junction, N.W. 10; constructional steelwork, Matthew T. Shaw & Co., Ltd., West Ferry-road, Millwall, E.14; electric light and power installation, Cecil Cooper & Co., Ltd., 14, Gloucester-road, South Kensington, S.W. 7; artificial stonework, W. Baxter Elliott, 304, Hither Green-lane, Lewisham, S.E. 13; steel lettering, S. Haskins & Bros., Ltd., Blackhorse-lane, Walthamstow, E. 17; flagstaffs, Piggott Bros. & Co., Ltd., 220–6, Bishopsgate, E.C. 2; automatic shutters, Joseph Stone, St. George's Ironworks, St. George's-road, Southwark, S.E.; handrails and newels, A. R. H. Maxted, Ltd., Premier Works, Hardwidge-street, Bermondsey, S.E. 1; stucco work and fibrous plaster, Plaster Decoration Co., Ltd., 30, Stannary-street, S.E. 11; ironmongery, A. Jones Lock Co., Ltd., 10, Dyers-buildings, Holborn, E.C. 1; vacuum cleaning apparatus, British Vacuum Cleaner and Engineering Co., Ltd., Parsons Green-lane, S.W. 6; and gas arc lamps, Gas Light and Coke Co.

East India-avenue.—After 150 years at the Royal Exchange, Lloyds, the famous firm of underwriters, is to remove to East India-avenue, Leadenhall-street. An area of nearly an acre has been acquired on the site of the old East India Company's quarters. The site reaches from East India-avenue to Lime-street. Altogether the scheme will involve millions of pounds. Sir Edwin Cooper, the architect of the new Port of London building at Tower Hill, is responsible for the plans.

HOUSING CONFERENCE

AT a Conference on Housing, held on Wednesday last week, at 4, The Sanctuary, Westminster, Mr. F. M. ELGOOD, F.R.I.B.A., said there had been volumes written and numbers of conferences held on the subject of housing, and he attributed some of the obstacles in the way of reform to apathy, thoughtlessness and ignorance. A large number of the population really did not know the conditions under which so many of their fellow beings lived. Education was, therefore, necessary, and it was proposed to inaugurate a Women's Housing Council in Westminster, to undertake work on the lines of the Council in Kensington, where public interest had been aroused and insanitary houses had been purchased and made habitable.

Mr. H. H. ALDRIDGE, National Housing and Town-Planning Council, suggested lines of remedial action, and said that, from the beginning of civilisation, the poor in every land had not been properly housed. In his opinion, the standard of wages should be raised, but housing reform should not wait for that, which might be fifty years. The money which was being wasted as the result of bad housing was more than the amount saved by leaving it alone, and, therefore, it could not afford to wait from the point of view of economy. A code of legislation had been placed on the Statute Book imposing certain duties on the local authorities, and it was their duty to suppress overcrowding by building houses and renting them to people at what they could afford to pay, and making up the difference out of the State funds. Before the question of housing could be solved, London would have to be considered as a whole in connection with transport and other things.

Miss S. M. BUSHELL, spoke of the desperate position of those who lived in slums and could afford to live in better houses if they could find them. She said the Women's Housing Council was to help the men: the question was not wholly for women, although, perhaps, they came more in contact with the overcrowding.

In reply to questions put by Mr. Cecil Smith, Mr. ALDRIDGE said that private enterprise had broken down, and the community must be prepared to pay the difference between the economic rent, and the rent people could afford to pay. The arrears of rent in municipal housing schemes generally were very low indeed. In Sheffield, they were high, owing to the very large amount of unemployment, and in many cases people were even going short of food in order to pay their rent. If confidence were restored in the building trade, private enterprise could get back to work and provide all the houses necessary, except for the very poor, who should be catered for by the State. He thought the only way to restore confidence, and to get houses built on a large scale, would be by the coming together of masters, men, the Ministry of Labour, Ministry of Health, and others, to form a housing policy spread over twenty years. The numbers of skilled builders had been extraordinarily reduced by the lack of apprentices, who were deterred by the small wages offered, and no guarantee of continuous employment.

Mr COURTHORPE (Western Australia) said the Workers' Board in his country was doing a great work. Anyone whose annual income was less than £400 could borrow £800 to build a house, the rent of which would be about seventeen shillings per week; and special facilities were made for people to travel to and from their work.

Obituary.

The death has occurred of Mr. Robt. S. Dawson, aged sixty-seven, of Chester-road, Sunderland, who had carried on business as a slate merchant in St. Mary's-crescent for nearly forty years.

The death has taken place, at Newport (Mon), of Mr. Robert William Moon, past-President of the Newport Master Builders' Association. He had constructed many buildings of note in Monmouthshire, including the National Provincial Union Bank, Ltd., at Newport.

PRICES CURRENT OF MATERIALS.*

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 2 0
Second Hard Stocks	3 17 0

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 13 3	Best Blue Pressed Staffs.	9 11 6
Do. grooved for plaster	2 15 3	Do. Bullnose	10 1 6
Do. Bullnose	3 8 3	Blue Wire Cuts	7 11 6
Best Stourbridge Fire brick :—			
2½ in.	11 3 0	3 in.	13 2 0
Glazed Bricks—			
Best White Ivory, and Salt Glazed Stretchers	22 0 0	D'ble Str'tch'rs	30 10 0
		D'ble Headers	27 10 0
		One Side and two Ends	31 10 0
		Two Sides and one End	32 10 0
		Splays and Squints	30 0 0
Headers	21 10 0		
Quoins. Bullnose and 4½ in. Flats	28 10 0		

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	2 7	3 in. per yd. super	2 11
2½ in. "	2 6	4 in. "	3 6

	s. d.	
Thames Ballast	10 6	per yard.
Pit Sand	14 9	" "
Thames Sand	15 6	" "
Best Washed Sand	15 6	" "
½ in. Shingle for Ferro-Concrete	14 0	" "
¼ in. "	15 0	" "
½ in. Broken Brick	10 6	" "
Pan Breeze	5 6	" "

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement, British Standard Specification Test £2 18 0 to £3 3 6
51/- alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 10 0
Super Cement	4 8 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" " Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	5 12 0
Sirapite, Coarse	3 9 6
" Finish	3 17 6
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	2 13 6
Hair	17 0 0
Granite Chippings	1 12 0

Note.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months, carr. pd.

Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dpt.

STONE.

	s. d.
Bath Stone—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 9½
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	2 11½
Portland Stone—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4
Do. do. delivered on road wagons at above stations, per ft. cube	4 5
White basebed, 3d. per ft. cube extra.	
Note.—½d. ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.	
Hopton-Wood Stone.	
Delivered at any Goods Station, London.	
Small random blocks, up to 10 ft. cube. Per ft. cube	7/-
Random blocks from 10 ft. and over "	17/-
Sawn two sides "	27/-
Sawn three or four sides "	32/-
York Stone, Blue—*Robin Hood Quality.*	
Delivered at any Goods Station London.	s. d.
6 in. sawn two sides landings to sizes (under 30 ft. super.) Per Ft. Super	5 3
6 in. rubbed two sides, ditto "	5 9
3 in. sawn two sides slabs (random sizes) "	2 1½
2 in. to 2½ in. sawn one side slabs (random sizes) "	1 5½
1½ in. to 2 in. ditto, ditto "	1 3
Hard York—	
Delivered at any Goods Station London.	
Scappled random blocks. Per Ft. Cube	5 6
6 in. sawn two sides landing to sizes (under 40 ft. super.) Per Ft. Super	5 4½
6 in. rubbed two sides ditto "	6 0½
4 in. sawn two sides slabs (random sizes) "	2 10
3 in. ditto. ditto "	2 5
2 in. self-faced random flags. Per Yard Super	7 11

ARTIFICIAL STONE.

Delivered in London Area in full van loads.	s. d.
Plain per ft. cube	6 6
Moulded " "	7 9
Cills " "	8 3

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£24 0	3 × 6	£25 0
4 × 9	24 0	3 × 11	24 0
4 × 8	29 0	2 × 11	24 0
4 × 7	28 0	3 × 9	33 0
3 × 8	26 10	2½ × 9	33 0
3 × 7	26 0	3 × 4½	24 0
2½ × 7	26 0	3 × 4	24 0

WOOD (*Continued*).

PLANED BOARDS.

1 × 11	£38 10	1 × 9	£33 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅝	21/-	1¼	33/6
¾	23/-	1½	38/6
1	26/6		

TONGUED AND GROOVED FLOORING. Inches.	per sq.	MATCHINGS (BEST). Inches	per sq.
1	28/6	⅝	17/6
1¼	33/6	¾	22/-
1½	38/6	1	26/-

BATTENS

Inches	s. d.
⅜ × 2	2 4 per 100 ft.

SAWN LATHS.

Per bundle				0	2 10
Dry Wainscot Oak, per ft. super, as inch	0	2 0	to	0	2 6
⅛ in. do. do.	0	1 6	to	0	2 0
Dry Mahogany—Honduras, Tabasco, African, per ft. super, as inch	0	1 9	to	0	2 6
Cuba Mahogany	0	3 0	to	0	3 6
Teak (Rangoon, Moulmein or Java), per load	45	0 0	to	50	0 0
American Whitewood planks, per ft. cube	0	14 0	to	0	16 0
Best Scotch Glue, per cwt.	4	10 0	to	—	
Liquid Glue, per cwt.	4	7 0	to	5	10 0

SLATES.

1st quality slates from Bangor or Portmadoc in truck loads delivered London area. Per 1,000 of 1,200.

	£ s. d.		£ s. d.
24 by 12	37 12 6	18 by 10	21 2 6
22 by 12	34 0 0	18 by 9	18 12 6
22 by 11	31 5 0	16 by 10	17 12 6
20 by 12	29 15 0	16 by 8	13 15 0
20 by 10	25 12 6		

TILES.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or Staffordshire district	5 7 6
Ditto hand made ditto	5 12 6
Ornamental ditto	5 17 6
Hip and valley tiles (per dozen) Hand made	0 9 6
Machine made	0 9 0

METALS.

Joists, Girders, &c., to London Station per ton—	£ s. d.
R. S. Joists, cut and fitted	13 10 0
Plain Compound Girders	15 10 0
Stanchions	17 10 0
In Roof Work "	20 10 0

MILD STEEL ROUNDS.

To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	16 10 0	⅝ in. to ½ in.	13 10 0
⅜ in.	14 10 0	⅝ in. to 2½ in.	13 0 0

Wrought-Iron Tubes and Fittings—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discount, carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Gas	52½%	52½%	62½%
Water	47½%	47½%	57½%
Steam	42½%	42½%	52½%
Galv'd—			
Gas	37½%	42½%	52½%
Water	31½%	37½%	47½%
Steam	25 %	32½%	42½%

C.I. Half-Round Gutters—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/1½	11d.	3½d.
3½ in.	1/2½	1/0½	3½d.
4 in.	1/4	1/1½	3½d.
4½ in.	1/5½	1/4	4d.
5 in.	1/7½	1/5½	5d.

O.G. Gutters.

3 in.	1/6½	1/2½	3½d.
3½ in.	1/6½	1/2½	3½d.
4 in.	1/7½	1/4	3½d.
4½ in.	1/9½	1/6½	4d.
5 in.	2/1½	1/9	5d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/7½	1/1½	1/8
2½ in. "	1/9½	1/4	2/0½
3 in. "	2/1½	1/8	2/5½
3½ in. "	2/6½	1/11½	2/10½
4 in. "	2/11½	2/4½	3/5½

L.C.C. Coated Soil Pipes—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6fts plain	3 0½	2 2½	2 8
2½ in. "	3 6½	2 5½	3 3½
3 in. "	4 2½	2 8	4 0½
3½ in. "	4 7	3 3½	4 8½
4 in. "	5 1	3 9½	5 5

L.C.C. Coated Drain Pipes—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9ft. lengths	4 9	5 8	8 10
4 in. " "	6 3	6 8	11 4
5 in. " "	7 6	11 6	18 2
6 in. " "	8 10	14 4	23 5

Iron—	Per ton in London. £ s. d.		£ s. d.
Common Bars	13 10 0	to	14 10 0
Staffordshire Crown Bars—good merchant quality	14 0 0	..	15 0 0
Staffordshire "Marked Bars"	17 0 0	..	18 0 0
Mild Steel Bars	12 10 0	..	13 10 0

METALS (*Continued*).

	£ s. d.		£ s. d.
Steel Bars, Ferro-Concrete quality, basis price	13 0 0	..	14 0 0
Hoop iron, basis price	16 10 0	..	17 10 0
" Galvanised	31 0 0	..	32 0 0
Soft Steel Sheets, Black—Ordinary sizes to 20 g.	15 0 0	..	16 0 0
" " " 24 g.	16 0 0	..	17 0 0
" " " 26 g.	18 0 0	..	19 0 0
Sheets Flat Best Soft Steel, C.R. & C.A. quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	21 10 0	..	22 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	22 10 0	..	23 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	24 10 0	..	26 10 0
Flat and Galvanised Corrugated Sheets—Ordinary sizes, 6 ft. to 9 ft. to 20 g.	21 10 0	..	22 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	22 0 0	..	23 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	24 0 0	..	25 0 0
Sheets Galvanised Flat, Best quality—Best Soft Steel Sheets, 6ft. by 2ft. to 3ft. to 20g. and thicker	23 10 0	..	24 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 10 0	..	26 10 0
Best Soft Steel Sheets, 26 g.	26 0 0	..	27 0 0
Cut Nails, 3in. to 6 in. (under 3in. usual trade extras.)	20 10 0	..	22 0 0

Metal Windows—Standard sizes suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1/4 to 1/7 per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
Lead—Sheet. English, 4 lb. and up	41 10 0
Pipe in coils	42 0 0
Soil Pipe	45 0 0
Compo pipe	47 10 0

Note—Country delivery, 30s. per ton extra; lots under 3 cwt., 2s. per cwt. extra and over 3cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

Old lead, ex London area, at Mills per ton	27 0 0	..	—
Do., ex country, carriage forward per ton	28 0 0	..	—

PLUMBERS' BRASS WORK.

Delivered in London.

New River Pattern Screw Down Bib Cocks for Iron.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/	45/-	76/-	153/-	246/-	510/- per doz.

New River Pattern Screw Down Stop Cocks and Unions.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

New River Pattern Screw Down Main Ferrules

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz

Caps and Screws.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz

Double Nut Boiler Screws.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2in.
7/6	11/6	17/-	29/-	36/-	63/- per doz.

Brass Sleeves.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

New River Pattern Croydon Ball Valves, S.F

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

Drawn Lead P. & S. Traps with Brass Cleaning Screw.

	1½ in.	1½ in.	2 in.	3 in.	
8 lbs. P. traps	33/-	41/-	56/-	101/-	per doz.
8 lbs. S. traps	35/-	45/-	66/-	120/-	

Copper—	£ s. d.		£ s. d.
Strong Sheet per lb.	0 2 3	..	—
Thin "	0 2 4	..	—
Copper nails "	0 2 3	..	—
Copper wire "	0 2 4	..	—
Tin—English Ingots "	0 2 6	..	—
Solder—Plumbers' "	0 1 1	..	—
Tinmen's "	0 1 3	..	—
Blowpipe "	0 1 5	..	—

PAINTS, &c.

	£ s. d.
Raw Linseed Oil, in pipes per gallon	0 3 10
" " " in barrels "	0 4 0
" " " in drums "	0 4 3
Boiled " in barrels "	0 4 4
" " " in drums "	0 4 3
Turpentine in barrels "	0 6 6
" in drums (10 gall.) "	0 6 9
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)	56 5 0
Genuine White Lead Paint— "Father Thames," "Nine Elms," "Park," "Supremus" and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered	79 10 0
Red Lead, Dry (packages extra) per ton	43 0 0
Best Linseed Oil Putty per cwt.	0 16 0
Flocos per cwt.	0 15 6
Size. XD Quality fkn.	0 [illegible]

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* The information given on this page has been specially compiled for The Builder and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. fourths....	3½d.	32 oz. fourths	8½d.
15 ,, thirds	4½d.	32 ,, thirds	10½d.
21 ,, fourths....	5d.	Obscured Sheet, 15 oz.	4d.
21 ,, thirds	6½d.	21 ,,	5½d.
26 ,, fourths....	6d.	Fluted 15oz. 6½d., 21oz.	9½d.
26 ,, thirds	7½d.	En'lled 15 ,, 5½d., 21 ,,	7½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
Rolled plate	4½d.
Rough rolled	5½d.
Rough rolled	5½d.
Figured Rolled, Oxford Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish white	6½d.
Ditto, tinted	9d.
Rolled Sheet	6d.
White Rolled Cathedral	5½d.
Tinted do.	7½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per gallon. £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 6
Fine Copal flatting	ditto	1 0 6
Hard drying Oak	ditto	0 18 0
Fine Hard drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 2 0
Best ditto	ditto	1 12 0
Best Japan Gold Size		0 12 0
Best Black Japan		0 12 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 9 0
Berlin Black		0 14 0
Knotting (patent)		1 5 0
French and Brush Polish		0 17 6
Liquid Dryers in Terebine		0 9 0
Outrass Black Enamel		0 7 0

EXPANSION OF BUILDING & CONSTRUCTION IN INDIA.

INDIAN PROJECTS.—The roads programme of the Bombay Municipal Corporation, widening, &c., is estimated at £362,823.

INDIAN TENDERS.—Among recent Indian tenders are: The Chief Controller of Stores, Indian Stores' Department, Delhi: steel mobilisation hutting with steel doors and windows for military works. Also 300 tons structional steelwork for the domes and half-domes of the Legislature Chamber, Delhi. The Chief Engineer, North West Railway, Lahore: 300,000 bearing plates, notched with six holes for dog spikes to take both 75 lbs, B.G.S. rails and 75 lbs. 4 in. flange rails, plates to be of wrought iron or mild steel. The Secretary, Railway Board, Delhi: delivery during the year ending March 31, 1925, 3,000 goods wagons for broad and metre gauge railways of types to the standard designs of the Indian Railway Conference Association. The Municipal Commissioner, Corporation of Rangoon: construction of Part B. of the New Municipal market contract including the steel framed and other buildings, comprising the main bazaar, single and double story lock-up shops, granite set and concrete paved roads and open spaces, and surface water drainage, covering an area about 600 ft. by 490 ft.

Rent Restrictions Act.

Mr. Graham Mould, barrister-at-law, gave the second of his lectures on this subject at the College of Estate Management recently. He dealt with the changes in the original Acts made by the new Act of this year; and emphasised the discretionary powers given to the Court by this Act. The lecturer then went through the Act section by section, showing the effect of the various changes, and pointing out the concessions made to various parties.

PATENTS.*

APPLICATIONS PUBLISHED.

203,431.—International One-Pipe Heater, Ltd. (International Heater Co.): Heating of houses, halls, and other buildings.

203,456.—A. W. Stewart: Ventilation fitting.

203,483.—F. J. Brougham (Perfect Window Regulator Co.): Window regulator.

203,490.—H. J. Jocelyne and Bifurcated & Tubular Rivet Co., Ltd.: Fastening-means for handles, door-knobs, and the like.

203,493.—S. Wildeblood: Automatic safety window-catch.

203,514.—C. A. Gray: Desks.

203,528.—D. McLean: Ventilation of cavity walls and building structures.

203,578.—Parker Rotary Stone Saw Co. and D. W. Parker: Rotary stone-sawing machine.

203,603.—B. May and Improved Metallic Paints, Ltd.: Vessels for containing paints, distempers, and other liquids of a similar character.

203,604.—A. Thomas: Device for setting saws.

203,636.—J. H. E. Francis: Vitreous enamelled tiles and bricks.

203,640.—A. Ferguson: Pivoted sliding-windows.

203,736.—F. Bibby: Wall brackets.

203,740.—H. F. Taylor: Sheet materials for paving and flooring.

203,746.—E. Hanson: Means for distributing granite and like chippings or sand on roadways.

203,756.—S. H. Lock: Packing-cases.

203,800.—A. J. Rout: Mattresses, chairs, and settees.

203,806.—J. McHardy: Door-knob furniture.

203,814.—Crompton & Co., Ltd., and H. O. Burge: Couplings for electric ceiling-fans.

203,826.—A. E. E. Cuckow: Treatment of building materials of a porous or absorbent nature.

203,833.—H. Kopplinger: Manufacture of metal sash-frames for double-casement windows.

203,844.—G. D. Peters & Co., Ltd., and L. J. Le Clair: Apparatus for raising, lowering, and holding windows.

203,847.—Titanine, Ltd., T. W. H. Ward, and J. Fletcher: Manufacture of dopes, varnishes, or paints.

203,853.—M. Rosenbaum: Method of rendering coats of distemper and mineral colours washable.

203,890.—H. R. Metcalfe and J. R. S. Hayes: Folding-chairs.

203,950.—W. H. C. D. Charity: Powders for cleaning and polishing metals and the like, and for cleaning and colouring stonework.

203,963.—W. R. Cochrane: Making of cement from blast-furnace slag.

203,972.—Waygood-Otis, Ltd. (Otis Elevator Co.): Electrically controlled lifts.

203,825.—S. Miller: Water or other taps.

203,986.—A. L. Benson: Device for trimming the edges of wallpaper.

203,988.—H. Abraham: Roofing-shingle strips.

203,999.—A. J. Rout: Arms of chairs and settees.

204,083.—W. H. Swanton and A. F. Echberg: Machine for moulding building-blocks.

204,093.—S. R. Trevor and J. E. Moosman: Manufacture of paints.

204,112.—H. Taylor: Combination bath and lavatory taps.

204,125.—T. F. Fenney: Means for cleaning bricks, paving blocks, and setts.

204,128.—J. J. Rawlings and Rawlings Bros., Ltd.: Gratings for wastes and vents of sinks, baths, and wash-basins.

204,135.—J. G. Connell: Supply fittings of water-closets, baths, and lavatory basins.

* All these applications are now in the stage in which opposition to the grant of Patents upon them may be made.

RAILWAY COMPANY EASEMENT: INCREASE OF BURDEN.

AN interesting point to those who have land near a railway and have rights over level crossings has been decided by the Court of Appeal in the recent case, South Eastern Railway Company *v.* Cooper (*Weekly Notes*, December 1).

In 1844 the plaintiffs had constructed a branch railway, and by agreement they had acquired some land from the defendant's predecessors in title. The portion thus acquired had originally abutted upon a highway, but in making the line the highway had to be diverted, and the defendant's land was cut off from the highway. To restore this access and to connect several portions of the property a right of roadway and passage for themselves, their agents and workmen, on foot, or on horseback, and with carts, carriages, horses, and other animals, had been granted to the defendants' predecessors in title, their heirs and assigns over a level crossing, subject however to the by-laws of the Company as to level crossings, and it was provided that the defendants were to have a right of roadway "for the commodious use of the same crossing and the safe and commodious use of the lands thereto adjoining," and these rights were not to be cut down or interfered with.

The level crossing had always been used for agricultural purposes only, but the defendant had recently opened a sandpit on his land and used the level crossing to carry gravel and sand to the highway, and in this action the company had sought to obtain a declaration that the defendant was not entitled to so use the crossing as substantially to increase the burden of the easement by altering or enlarging its character and extent as enjoyed at the time the railway was constructed, and an injunction was asked for. The Court of Appeal, reversing the Court below, held that the grant was a grant in wide terms of a right of way for all purposes and not merely a grant of an accommodation way; that the grant was not so cut down as to show that the roadway was to be used for agricultural purposes only, nor was it limited to the user at the time it was granted in 1847. It was contended that the grant was so wide as to be *ultra vires* the railway company, but the Court of Appeal on the authority of a case, Rex *v.* Inhabitants of Leake (1833, 5 B. & A. 469), negatived that contention, holding that where it was compatible with the use of a railway company to make a wide grant of way subject to directions to be contained in by-laws, such a grant could not be held *ultra vires*.

"THE BUILDER" ARCHITECTS' & SURVEYORS' POCKET DIARY.

This diary, for the first edition of which there was a large demand, has been much improved by the substitution of a flexible leather cover, which will ensure that it does not become ragged after being carried in the pocket for several months. A thinner paper is used this year, so that the same number of pages are contained in a book occupying less space in the pocket. This diary is specially prepared for the use of architects and surveyors by *The Builder* in conjunction with the Architects' and Surveyors' Assistants' Professional Union (price, 2s. 9d., post free), and the first sixty pages contains a great deal of information required by members of those professions in their daily practice, including fire insurance, mensuration notes, tables of areas of circles, weights and measures, &c., a list of professional institutions, with notes as to membership, prizes and studentships offered, &c.; the new British Standard Sections; and a great deal of useful information under the heading of the different trades. The diary is arranged with one opening to each week.

CURRENT PRICES FOR BUILDING WORK IN LONDON.*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	6
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	35	0
Add if in underpinning in short lengths	" "	7	6
Add if in floors 6 in. thick	" "	3	6
Add if in beams	" "	4	0
Add if aggregate 1 : 2: 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	3	3

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	2	0	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	" "	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	10
Axed in stocks	" "	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	1	1
Setting ordinary register grates and stoves	each	1	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	9	0
¾ inch on flats in two thicknesses	" "	6	6
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	3

MASON.

		s.	d.
York stone templates fixed	per foot cube	12	6
York stone sills fixed	" "	21	6
Bath stone and all labour fixed	" "	10	6
Portland stone fixed	" "	19	6

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	3
Do. joists	" "	5	9
Do. roofs, floors and partitions	" "	6	3
Do. trusses	" "	8	3

		¾"	1"	1¼"	2"
Deal rough close boarding	per sq.	38/-	44/-	50/-	80/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾"	1"	1¼"	1½"
Deal-edges shot	per sq.		49/-	58/-	67/-
Do. tongued and grooved	"		54/-	65/-	72/-
Do. matchings	"	45/-	55/-		
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	4
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares double hung, double hung with pulleys, lines and weights; average size	" "	3	9

DOORS.

		1½"	1¾"	2"
Two-panel square framed	per ft sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/8	1/9	2/0
Deal shelves and bearers	"	1/5	1/7	1/10
Add if cross tongued	"	2d.	2d.	2d.

STAIRCASES.

		1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets		2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed		1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run.	0	9
Mahogany handrail; average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/4
Sash fasteners	11½d.	Mortice locks	5/3
Casement fasteners	1/5	Patent spring hinges and letting in to floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	17	0
Plain compound girders	"	20	0
Do. stanchions	"	23	0
In roof work	"	28	0

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/11	2/4½	3/7	4/-
Ogee Do. Do.	"	2/4½	3/1	3/10	4/9
Rain-water pipes with ears	"	2/9	3/7		
Extra for shoes and bends	each	4/4	5/11		
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	54	0
Do. Do. in flats	"	52	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft run.	0	6
Soldered seam	" "	1	6
Copper nailing	" "	0	6

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	11d.	1/8	1/11	3/5	4/2	
Do. service	"	1/7	2/1	2/6	3/10		
Do. soil	"						6/10
Bends in lead pipe	each					3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"				14/7	19/6	
Bib cocks and joints	"	6/4	9/7	15/4	41/-		
Stop cocks and joints	"	15/4	17/2	25/8	64/-		

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	3
Do. Do. Sirapite	"	2	6
Do. Do. Keen's	"	3	6
Add sawn lathing	"	1	5
Add metal lathing	"	2	3
Portland cement screed	"	1	10
Do. plain face	"	3	0
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

		s.	d.
21 oz. sheet plain	per foot sup.	0	9
26 oz. Do.	" "	1	1
Obscured sheet	" "	1	3
⅛ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	11
¼ in. wired cast plate	" "	1	5

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	"	1	2
Preparing for and hanging paper	per piece	2/- to	4/-

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10 % on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*. † Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
‖ Denotes *accepted subject to modifications*.

ABERYSTWYTH.—For erection of seven houses at Trefechan site, for T.C. :—

	Per house.
W. J. Gregory & Son, Colwyn Bay	£658
Calways, Ltd., Swansea	475
T. Jones & Son	457
Evans Bros., Cemmes	427
†J. E. Morgan Jones, Oswestry	395

BARNSLEY.—For construction of (*a*) 44 houses at Carlton-lane; and (*b*) 52 houses on same site, for the T.C. :—

*(*a*) C. D. Potter & Sons	£15,956 4
*(*b*) Fairhurst Bros.	18,850 0

BATLEY.—Erection of 32 houses adjoining Copley-street and Loxley-street, at Bradford-road West, for the Corporation :—

Mason work—
Herman Booth, Batley.
G. Aveyard, Batley.

Slater—
W. H. Thompson, Batley.

Joiner's work—
J. Brooke & Sons, Batley Car.

Plumber's work—
A. Shackleton, Batley.
Walshaw & Wood, Batley.

Electrical work—
Hepworth & England, Batley.

Plasterer's work—
J. Greenwood, Batley.
W. Lockwood, Batley.

Pain'er's work—
N. Ramsden, Dewsbury.
Each house, £440. Total cost, £14,107

BLACKBURN.—For erection of a pavilion at Rockville Recreation Ground, for the T.C. Mr. A. T. Gooseman, Borough Engineer, Town Hall, Blackburn :
John Fecitt, Ltd., Blackburn.

GLASGOW.—Supply of steel tubes for housing schemes, for the T.C. :—

*Stewarts & Lloyds	£2,380 6 9

GLASGOW.—For the brickwork in connection with the erection of buildings at Mearnskirk Sanatorium, for the T.C. :—

James Crawford	£50,329 6 2
John Train & Co., Ltd.	50,289 1 0
William Taylor & Son (Glasgow), Ltd.	49,875 5 5
*Robert Rogerson & Co., Glasgow	47,907 5 10

GLASGOW.—For joinery works in connection with buildings at Mearnskirk Sanatorium, for the T.C. :—

John MacDonald (Contractors), Ltd., Burnside	£29,013 16 8
Lawson & Co., Govan	28,813 9 0
*Robert Rogerson & Co.	28,593 14 5

GLASGOW.—For the erection of a sub-station at Baillieston, for the T.C. :—

*Brown, Fraser & Co.—*Brickwork, &c.*	£4,720 0 0
*S. M. Stark—*Carpenter and glazier*	1,040 0 0
*C. Wilson—*Slater*	244 2 3
*H. Twaddle & Son—*Plumber*	298 2 0
Norfolk Decorators, Ltd.—*Painting*	89 2 3
*Brown, Fraser & Co.—*Reinforced concrete*	1,202 0 0
Total	£7,593 6 6

HARBLEDOWN.—For erection of small house Mr. E. A. Jackson, architect, Ashford, Kent :—

W. Cozens, Canterbury	£2,438 0 0
—. Judges, Faversham	2,239 0 0
O. Marx, Folkestone	2,168 0 0
G. Browning, Canterbury	1,956 0 0
W. Shippam, Ashford	1,945 0 0
Earl & Co., Ashford	1,835 10 0
Clark Bros., Maidstone	1,775 8 6
Dickins & Phillips, Canterbury	1,775 0 0
L. T. Dadds, Canterbury	1,739 0 0
A. Wiltshier, Canterbury	1,738 0 0
Whiting Bros., Faversham	1,736 0 0
D. Godden & Son, Ashford	1,728 0 0
Lewis & Son, Dover	1,637 0 0
R. J. Barwick, Dover	1,610 0 0
J. Hawkes, Faversham	1,310 5 6
*W. Watling, Cranbrook	1,225 0 0

LEOMINSTER.—For construction of 10 parlour type and 10 non-parlour type houses, for the T.C. Mr. James Budd, Borough Surveyor, Town Hall, Leominster :—

Mann & Price, Kington	£10,080
W. C. Bott, Hereford	9,440
Watkins Bros., Leominster	8,900
Philpott Bros., Leominster	8,900
Turford & Southward, Ludlow	8,300
*Powles & Jones, Leominster	8,300
Surveyor's estimate	8,800

LETCHWORTH.—For erection of bungalow, Meadow Way, for Mr. A. Monger. Mr. J. C. Tickle, architect, Lytton-avenue, Letchworth :—

R. W. Smith, Letchworth	£725 0 0
Pettengall & Clark, Letchworth	680 9 0
Jeffs & Bigley, Letchworth	665 0 0
J. A. L. White, Letchworth	650 10 6
*Quinn & Seater, Letchworth	650 0 0

LONDON.—For taking down old and erecting new urinal in High-street, for the Lewisham B.C. :—

Charles Cutler, Hither Green	£183 0 0
Burke, Collins & Co., Lee	153 10 0
*A. T. Peyton, Lewisham	148 17 6

LONDON.—For Sutton Court-road, Chiswick, for the U.D.C. Mr. Edward Willis, Engineer, Town Hall, Chiswick :—
The Acme Flooring and Paving Co., £17,938. 9d. per yard per annum for maintenance.
F. D. Davidson, £19,792 10s. 2s. 6d. per yard per annum for maintenance.
*A. E. Farr, Ltd., £12,881.
Howard Farrow, £18,086 5s.
W. Griffiths & Co., Ltd., £18,301 16s. 6d.
The Improved Wood Pavement Co., £16,960 15s. 6d. 6d. per yard per annum for maintenance.
Surveyor's estimate, £20,670.

LONDON.—For conversion of No. 8, Carlton House-terrace, S.W., into four flats. Messrs. F. W. Rees & Archer-Betham, architects, 44, Park-lane, Croydon. Quantities by Mr. W. J. Lewis, Ilford :—

Bridge & Co., Croydon	£10,500
Arthur Vigor, Ltd., London	9,993
Winter & Ward	9,808
Holloway Bros. (London), Ltd., London	9,720
Holland & Hannen & Cubitts, Ltd., London	9,714
O. Craske, Chelsea	9,548
Trollope & Colls, Ltd., London	9,340
Hall, Beddall & Co., London	9,200
H. D. Ebbutt, Ltd., Croydon	9,200
Ashby & Horner, Ltd., London	9,190
Mullen & Lumsden, Ltd., London	9,155
Read & Sons, London	9,118
Walter Lawrence, Ltd., London	8,989
C. H. Gibson, Ltd., Croydon	8,932
Bovis, Ltd., London	8,857
Lewis, Helby & Tanner, Croydon	8,800
J. McManus, Ltd., London	8,623
W. F. Blay, Ltd., London	8,384
F. G. Minter, London	7,982
Architect's estimate	8,600

LONDON.—Supply of reinforcement for repairs to three reservoirs, for the Metropolitan Water Board :—

*Richard Hill & Co.	£386 13 6

LONDON.—For decorative and repair works at Tuberculosis Dispensary and Maternity and Child Welfare Centre, for the Westminster C.C. :—

Contractors.	Exterior.	Tuberculosis Dispensary.	Maternity and Child Welfare.
Army & Navy Co-operative Supply, Ltd.	£524	£177	£161
Townsend & Pearson, Ltd.	447	127	129
Sims & Russell	397	132	121
*Walter Lilly & Co.	330	115	120

LONDON.—For repairs to flooring at 59 and 60, Jessel House, for the Westminster C.C. :—

Burton Bros.	£198 10 4
Sims & Russell	174 4 3
*Townsend & Pearson, Ltd.	161 19 3

LONDON.—For extension of West Green Baptist Church, Tottenham. Mr. Geo. W. Newman, architect, 140, Wellington-road, Bush Hill Park, Enfield. Quantities by Mr. W. H. Lamble, 1, Broad-street Buildings, E.C.2 :—

Kelland & Sons, Ltd.	£4,078
G. Groves & Son	3,995
Allen Fairhead & Son	3,741
James Stewart	3,725
Albert Monk	3,720
A. Harston & Co.	3,677
Henry Knight & Son	3,673

METROPOLITAN ASYLUMS BOARD.—The following tenders have been received for various works :—

Darenth Training Colony—Weighbridge foundations, &c.—

L. Kazak, Hampstead	£352 0 0
†D. C. Bowyer, Belvedere, Kent	197 0 0

Northern Hospital—Weighbridge foundations—

J. Darch, Ltd., E.C.	£275 0 0
†Barnes & Co., Lewisham	195 0 0

White Oak—Repairs to tiled roofs—

J. Macquire, Bermondsey	£253 0 0
W. H. Hill, Bromley	225 0 0
Barnes & Co., Lewisham	195 0 0
†D. C. Bowyer, Belvedere	149 12 0

Tooting Bec Mental Hospital extension—Asphalt paving to covered ways—

T. W. Heath, Ltd., S.W.	£487 10 0
J. H. Bradshaw, Ltd., Manchester	406 7 5

BOLTON-UPON-DEARNE.—For erection of 20 houses (four Parlour Type, 16 Non-Parlour Type), for the U.D.C. Mr. W. H. Adams, Architect, Council Offices, Bolton-upon-Dearne :—

	Parlour B.N. 1 (2)	Parlour B.N. 2 (2)	Non-Parlour A.N. 3 (8)	Non-Parlour A.N. 3x (8)	Total. (20)
W. Gelder Bros.	£995 15 ..	£993 10 ..	£3,060 ..	£3,060 ..	£8,149 5
Smith & Hawley, Ltd. Sheffield	920 8 ..	893 10 ..	2,760 ..	2,760 ..	7,333 18
G. W. Meanley & Son Mexboro'	796 0 ..	792 0 ..	2,840 ..	2,840 ..	7,268 0
Hanwell & Co., Rotherham	875 0 ..	870 0 ..	2,760 ..	2,760 ..	7,265 0
Firth & Whittington, Doncaster	830 0 ..	820 0 ..	2,776 ..	2,776 ..	7,202 0
E. E. Dickinson, Bolton-upon-Dearne	834 0 ..	844 0 ..	2,680 ..	2,720 ..	7,078 0

BROXBOURNE.—Provision of a Stoney sluice, for the Metropolitan Water Board :—

*Ransomes & Rapier	£230

BURTON-ON-TRENT.—For alterations to offices, &c., at Town Hall. Mr. George T. Lynam, Borough Engineer, Town Hall, Burton-on-Trent :—

*Thos. Lowe & Sons, Burton-on-Trent	£1,805 15 11

BURTON-ON-TRENT.—For erection of 48 houses. for the T.C. Mr. G. T. Lynam Borough Engineer, Town Hall, Burton-on-Trent :—

†Chadwick & Keen, Burton-on-Trent—8 houses in brick	£3,480
†G. Hodges & Son, Burton-on-Trent—10 houses in hollow blocks	4,980
30 houses in brick	15,240

CAMBRIDGE.—For improvement works in Brooklands-avenue, for the T.C. :—

*Jonas & Sons	£236

CHORLEY.—For re-flooring four class-rooms at Duke-street Council School. Education Officer, Town Hall, Chorley :—

*William Townson & Sons, Ltd., Bolton.	

CONISBOROUGH.—For laying sewer in Tickhill-square, for the U.D.C. :—

*H. Cooper, Maltby	£298

DORCHESTER.—For repairs and renovations to rooms at North-square, for the T.C. Mr. H. D. Strange, Borough Surveyor, 21, North-square, Dorchester :—

Dorchester Building Guild, Dorchester	£328 7 2
*Chas. E. Slade, Dorchester	258 10 0

GLASGOW.—For construction of Cardonald main road, for the T.C. :—

*A. M'Cracken & Sons, Motherwell	£15,204 1 3

GLASGOW.—For repair of roads at Ruchill Hospital, for the T.C. :—

*Aitken Thomson & Sons	£105

GLASGOW.—For (*a*) excavation, mason, &c., works; and (*b*) steel work, in connection with new buildings at corner of Trongate and High-street, for the T.C. :—

*(*a*) Emery & Sons	£21,676 0
*(*b*) Redpath, Brown & Co.	3,336 7

HULL.—For the external painting of Corporation properties :—

*(1) City Engineer	£27 10
*(2) J. Codner & Son	132 0
*(3) City Engineer	29 10
*(4) Kettlewell, Sons & Co.	110 10
*(5) J. Codner & Son	29 10
*(6) Kettlewell, Sons & Co.	47 10
*(7) do.	15 10
*(8) City Engineer	31 0
*(9) do.	88 0

LEEDS.—For erection of sub-station in Devonshire-avenue, Roundhay, for the T.C. :—

J. Ferguson & Son	£461 18 6

LEEDS.—For materials in connection with water main being laid in Dewsbury- and other roads, for the T.C. :—

*Clayton, Sons, & Co., Ltd.—Mild steel tube for railway crossing at Dewsbury-road	£222 0 0
*Cochrane & Co., Ltd.—	
250 9-in. concrete-lined pipes, at per pipe	3 14 9
400 18-in. concrete-lined pipes at per pipe	8 7 0
42 18-in. cast-iron special pipes, at per ton	21 0 0
*Stanton Ironworks Co., Ltd.—	
340 12-in. concrete-lined pipes at per ton	9 18 6
91 12-in. cast-iron special pipes, at per ton	21 5 0

LEEK.—For painting interior of 20 houses on housing site, for the U.D.C. Mr. W. E. Beacham, Surveyor, Town Hall, Leek :—

E. Phillips & Sons, Leek	£480 0 0
G. Mason, Leek	395 0 0
V. Robinson, Leek	390 0 0
Baker & Co., Whitchurch	367 16 5
C. Dale, Leek	305 0 0
Warren & Fogg, Leek	300 0 0
Condring & Sons, Leek	239 0 0
J. Williams, Longlin	179 0 0
Emery & Co., Birmingham	145 0 0
*E. Hughes, Leek	180 0 0

LEEK.—For bowling pavilion, for Bowling Green Committee. Mr. W. E. Beacham, Architect, Town Hall, Leek :—

T. Godwin, Hanley	£1,425
J. Heath & Sons, Leek	1,399
T. Grace, Leek	1,220
J. Cooke, Longport	1,250
S. Salt, Leek	1,195

A. C. W. Hobman & Co., Ltd., South Bermondsey	£348 19 3
Val de Travers Asphalte Paving Co., Ltd., E.C.	326 9 2
Ragusa Asphalte Paving Co., Ltd., W.	305 14 7
Limmer & Trinidad Lake Asphalt Co., Ltd., S.W.	296 0 0
†Neuchatel Asphalte Co., Ltd., S.W.	275 0 0

Leavesden Mental Hospital—Re-slating roof of water tower—

†J. Macquire, Bermondsey	£152 0 0

Tooting Bec Mental Hospital—Alterations and extensions to electric lighting and power installations in kitchen—

A. Higginbotham & Sons, Idle	£420 0 0
G. Morrison, Blackpool	417 2 6
S. Reed & Sons, S.E.	285 0 0
T. Clarke & Co., Ltd., S.W.	270 0 0
Manley & Regulus, Ltd., Wolverhampton	262 12 0
Tredegars (1923), Ltd., W.	241 18 6
C. A. Carpenter, E.C.	238 0 0
Guild Housing, Ltd., Acton	234 12 6
Myall Bros., Leigh-on-Sea	228 0 0
†Guild of Engineers (London), Ltd., S.E.1	153 0 0

Tooting Bec Mental Hospital extension—Supply of cast-iron rainwater gutters, &c.—

S. & G. A. Allwood, Ltd., Derby	£210 0 0
Carron Co., Stirlingshire	186 10 8
D. King & Sons, Ltd., Glasgow	178 6 9
J. Allen, Senr., & Son, Ltd., E.C.	169 11 8
Pryke & Palmer, Ltd., E.C.	168 14 5
Teuten & Co., Ltd., E.C.	£144 16 6
†A. Danks, Ltd., Gloucester	137 0 0
Blagg & Johnson, Ltd., Newark-on-Trent (for pressed steel)	106 0 0

Tooting Bec Mental Hospital—Installation of new brick built steam pipe oven—

W. F. Mason, Ltd., Manchester	£965 0 0
T. Hunt & Sons, Battersea	850 0 0
Benham & Sons, Ltd., W.1	818 0 0
J. Baker, Sons, & Perkins, Ltd., Peterborough	798 10 0
Alfred Hunt, Ltd., Leicester	650 0 0
†Thomas Collins & Co., Bristol	600 0 0
Henry Heaton, Harlow, Essex	574 0 0

North-Western Hospital—Installation of 20-ton weigh-bridge—

	With platform 20 ft. long.	Credit for old machine
Day & Millward, Ltd., Birmingham	£500 0 0	—
W. & T. Avery, Ltd., E.C.	495 0 0	£28
S. Parsons & Co., Ltd., Bradford	455 0 0	—
Henry Pooley & Son, Ltd., E.C.	470 0 0	18
Saml. Denison & Son, Ltd., Leeds	440 0 0	20
Ashworth, Son, & Co., Ltd., E.C.	425 0 0	20
†Hodgson & Sons (Weighing Machinists), Ltd., Salford	355 0 0	20
James Spencer & Co., Ltd., Manchester	350 0 0	20
Charles Ross, Ltd., Sheffield	325 0 0	Included

Queen Mary's Hospital for Children—Installation of aerated water plant—

Bratby & Hinchcliffe, Ancoats, Manchester	£165 0 0
†Barnett & Foster, N.1	130 14 0

NORTHAMPTON.—For erection of new Isolation Block at the Northampton General Hospital. Mr. F. W. Dorman, architect, 18, Market-square, Northampton. Quantities by Mr. John T. Burt, F.S.I., 6A, St. Martin's, Leicester:—

Edward Green & Son, Northampton	£15,968
Edwin Archer & Sons, Ltd., Northampton	14,795
Executors of Henry Green, Northampton	14,669
S. & C. Cosford, Northampton	14,632
A. P. Hawtin & Sons, Ltd., Northampton	14,586
J. T. Powell, Northampton	14,540
*Henry Martin, Ltd., Northampton	14,424

SHEFFIELD.—For alterations and fittings for sanitary inspector's office at Town Hall, for the T.C.:—

*John Walsh, Ltd.	£268 15

WILLESDEN GREEN.—For alterations and additions to "The Clergy House." Mr. Wallace J. Gregory, architect, 8, High Holborn, W.C.1:—

W. H. Watts	£1,566 7 6
I. C. Tennant & Co.	1,388 0 0
H. Roffey & Sons	1,318 0 0
H. F. Wilkins	1,317 0 0
*The Modern Decorators & Builders	1,100 0 0

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